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CONTAMINATION ASSESSMENT REMEDIAL ACTIVITIES INVESTIGATION CRASH CREW  
TRAINING AREA SITE 3 INTERIM DATA REPORT NAS PENSACOLA FL  
11/01/1992  
ECOLOGY AND ENVIRONMENT, INC.

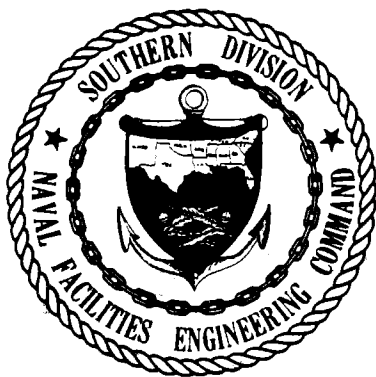


Contamination Assessment/  
Remedial Activities Investigation  
Crash Crew Training Area (Site 3)  
November 1992



Naval Air Station Pensacola  
Pensacola, Florida

Interim Data Report



Southern Division  
Naval Facilities  
Engineering Command  
Charleston, South Carolina  
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CONTAMINATION ASSESSMENT/  
REMEDIAL ACTIVITIES INVESTIGATION  
CRASH CREW TRAINING AREA (SITE 3)  
NAVAL AIR STATION PENSACOLA  
PENSACOLA, FLORIDA

INTERIM DATA REPORT

November 1992

Contract N62467-88-C-0200

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19. ABSTRACT (Continue on reverse if necessary and identify by block number) * This Interim Data Report contains the results of Phase I of the Contamination Assessment/Remedial Activities Investigation conducted at the Crash Crew Training Area (Site 3), located on the Naval Air Station in Pensacola, Florida. This work was conducted as part of the U. S. Navy's Installation Restoration Program. The objective of the Phase I investigation at Site 3 was to identify principal areas and primary contaminants of concern at the site and to provide recommendations for subsequent phases of investigation. This investigation was the first step in the completion of a RCRA Facility Investigation/Corrective Measures study for the site. Surface water, sediment, soil, and groundwater contamination are present on Site 3. Metals, TRPHs, aromatic-type VOCs, PAHs--base/neutral extractables, and phenols--acid extractables are the primary on-site contaminants. Contamination is mostly restricted to and clearly associated with areas where burning activities were conducted and adjacent areas. Localized on-site, additional off-site, and ambient sources of contamination may also be present. Overall,					
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it appears that little off-site migration of contaminants has occurred. Additional assessment activities will be required at Site 3. Furthermore, Interim Remedial Measures should be implemented to address the presence of excessively contaminated soils in and adjacent to burn areas 1 through 6.

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## RECORD OF DOCUMENT CHANGES

Revisions to this document were made based on comments received from the U.S. Environmental Protection Agency, Florida Department of Environmental Regulation, Florida Department of Natural Resources, and National Oceanic and Atmospheric Administration. All revisions are in bold and enclosed in brackets to denote changes to the last version of this document.

## EXECUTIVE SUMMARY

As part of the U.S. Navy's Installation Restoration Program, Phase I of the Contamination Assessment/Remedial Activities Investigation was conducted for the Crash Crew Training Area (Site 3), located on the Naval Air Station in Pensacola, Florida. This work was performed by Ecology and Environment, Inc., (E & E) under contract to the Southern Division, U.S. Navy, Naval Facilities Engineering Command.

Site 3 occupies an open area of land approximately 850 feet by 2,100 feet along the southwestern border of Forest Sherman Field. The site is bounded to the east by aircraft runway 19; to the north by a paved aircraft taxiway; to the west by partially wooded scrub lands; and to the south by an open field. An unimproved jeep trail runs north and south across the western portion of the site and connects with several other dirt trails. Four hundred feet west-southwest of Site 3 is NAS Pensacola Site 19, the Fuel Farm Pipeline Leak site.

Surface runoff from the site is captured by two stormwater runoff drainage lines located near the eastern boundary of the site. The first stormwater drainage line discharges surface runoff derived from the northern third of the site to a drainage canal that flows northward into Bayou Grande. The second stormwater drainage line discharges surface runoff from the southern two-thirds of the site into a small creek that flows southeastward into Sherman Inlet.

Site 3 contains at least eight different burn areas. The two northernmost burn areas are currently being used for training exercises.

The purpose of the Phase I investigation was to identify principal areas and primary contaminants of concern at the site and to provide recommendations for subsequent phases of investigation. The Phase I fieldwork included a site reconnaissance; habitat/biota survey; surface emissions survey and particulate air screening; geophysical survey;

utilities survey; soil headspace survey; the collection and analysis of surface water, sediment, soil, and groundwater samples; and a hydrologic assessment.

Surface water, sediment, soil, and surficial zone groundwater contamination are present on Site 3. Most of the detected contamination is restricted to and clearly associated with areas where burning activities were conducted on site and the adjacent areas. Furthermore, although the Phase I results also indicate the potential presence of localized on-site, additional off-site, and ambient sources of contamination, overall it appears that little off-site migration of contaminants has occurred. In particular, the presence of surface water and/or sediment contamination in samples collected from the stormwater outfalls located north and south of Site 3 could reflect off-site and/or ambient sources.

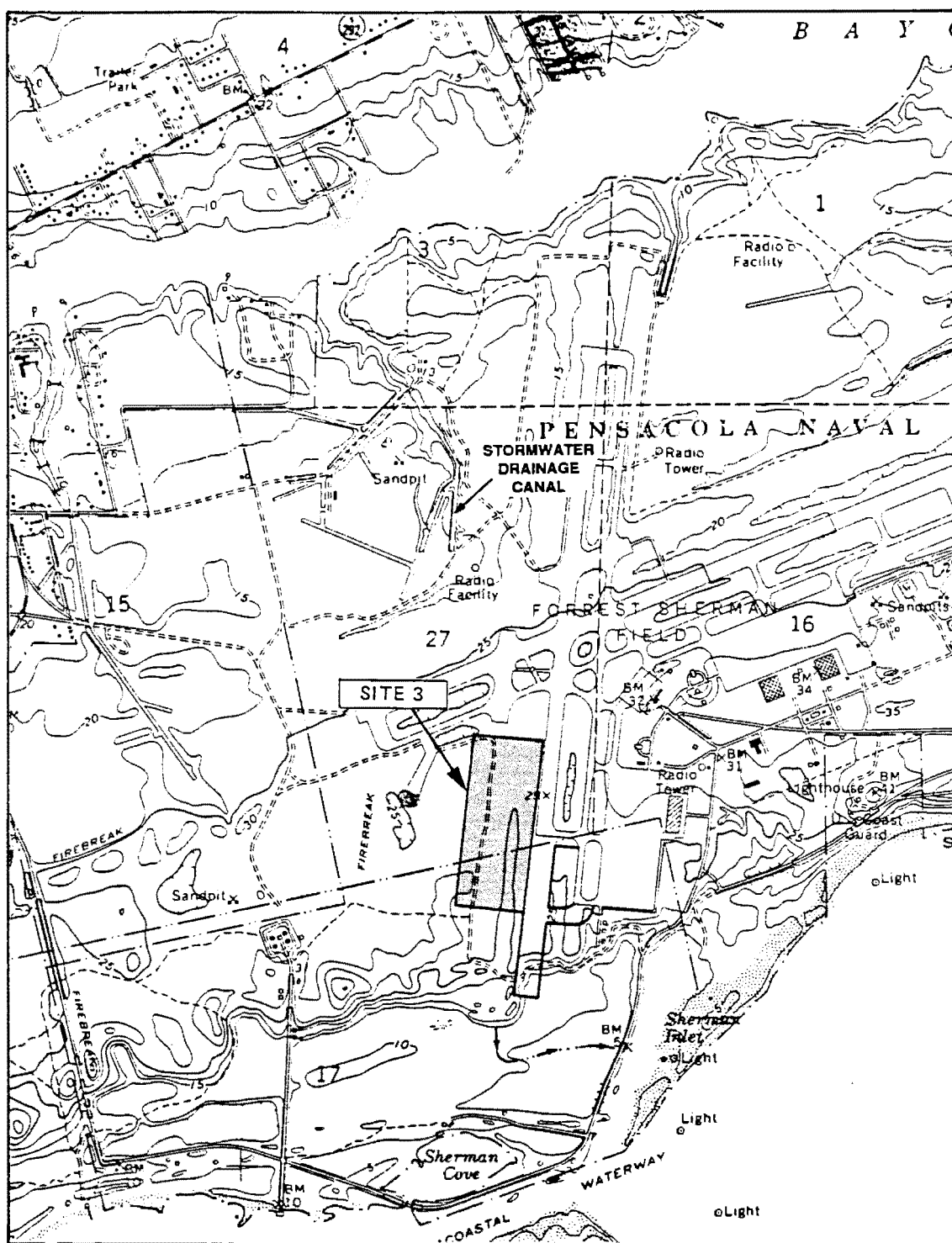
Metals (chromium, lead, cadmium, and iron), total recoverable petroleum hydrocarbons (TRPHs), aromatic-type volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs)-base/neutral extractables, and phenols-acid extractables are the primary on-site contaminants. On-site surface water (catch basins LL1F and AA3M) and groundwater samples contained one or more of these contaminant species at concentrations exceeding applicable or potentially applicable Florida water quality standards. Soil sample contaminant concentrations were well below Resource Conservation and Recovery Act (RCRA) Proposed Corrective Action Levels (PCALs), where established; however, soil headspace concentrations within and adjacent to burn areas 1 through 6 were well above the 50 parts per million (ppm) Florida criterion for excessively contaminated soils.

Additional assessment activities will be required at Site 3. Furthermore, Interim Remedial Measures should be implemented to address the presence of excessively contaminated soils in and adjacent to burn areas 1 through 6.

## 1. INTRODUCTION

This Interim Data Report presents the findings of the Phase I investigation activities performed for Site 3, Crash Crew Training Area, located at the Naval Air Station (NAS) in Pensacola, Escambia County, Florida. This report has been prepared by Ecology and Environment, Inc., (E & E) for the Southern Division, U.S. Navy, Naval Facilities Engineering Command, under Contract No. N62467-88-C-0200. The information presented in this report is based on information and file documents provided by the Navy and on information gathered during the Phase I fieldwork conducted on the site from April 1991 to August 1991. The investigation was conducted in accordance with the administrative documents prepared by E & E for this project, which include the June 1990 Project Management Plan, June 1990 Site Management Plan, July 1990 Generic Quality Assurance Project Plan (GQAPP), July 1990 General Health and Safety Plan, and June 1990 Contamination Assessment/Remedial Activities Investigation Work Plan--Group J with appended Site-Specific Health and Safety Plan and Site-Specific Quality Assurance Plan. All references to these documents in this report apply only to the 1990 versions.

Site 3 occupies an open area of land approximately 850 feet by 2,100 feet along the southwestern border of Forrest Sherman Field (see figures 1-1 and 1-2). The site is bounded to the east by aircraft runway 19; to the north by a paved aircraft taxiway; to the west by partially wooded scrub lands; and to the south by an open field. An unimproved jeep trail runs north and south across the western portion of the site and connects with several other dirt trails. Four hundred feet west-southwest of Site 3 is NAS Pensacola Site 19, the Fuel Farm Pipeline Leak site.



SOURCE: U.S.G.S. 7.5 Minute Series (Topographic) Quadrangles: Fort Barrancas, Fla. 1970 and West Pensacola, Fla. 1970, Photorevised 1987; Ecology and Environment, Inc., 1991

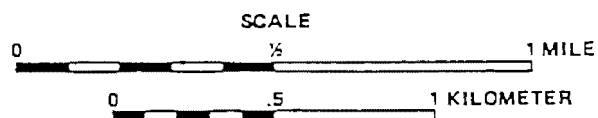
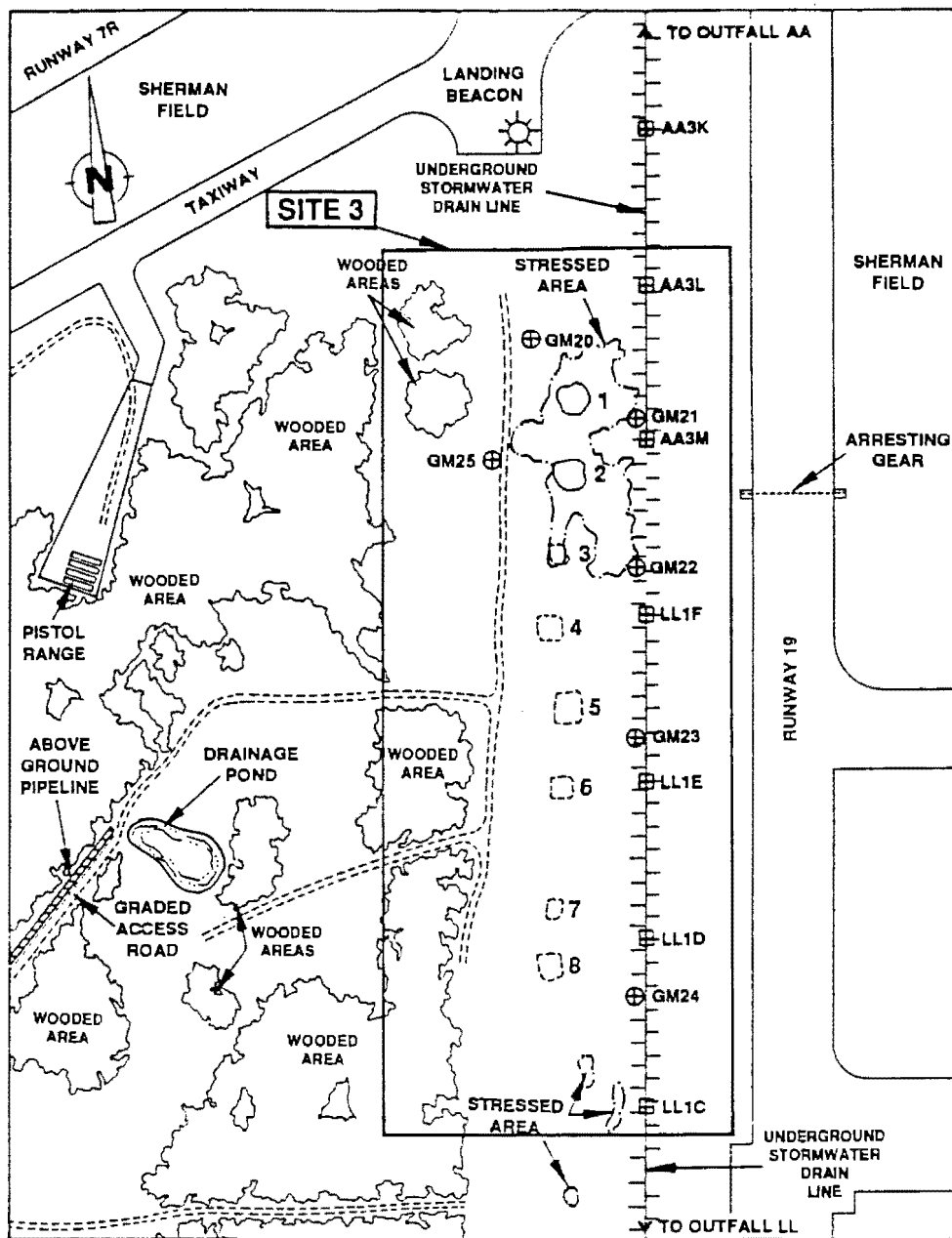


Figure 1-1 LOCATION MAP — NAS PENSACOLA SITE 3



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

#### SCALE

0 100 200 400 600 800 FEET

#### KEY:

--- Jeep Trail

⊞ Stormwater Catch Basin with Grate

AA3K/LL1C Stormwater Catch Basin Designation

○ Active Burn Area

2 Burn Area Number

○ Former Burn Area

⊕ Existing Permanent Shallow Monitoring Well

GM21 Permanent Monitoring Well Number

||| Drainage Swale

Figure 1-2 SITE VICINITY MAP — NAS PENSACOLA SITE 3



Surface runoff from the site is captured by two stormwater runoff drainage lines located near the eastern boundary of the site (see Figure 1-2). The first stormwater drainage line discharges surface runoff derived from the northern third of the site to a drainage canal that flows northward into Bayou Grande. The second stormwater drainage line discharges surface runoff from the southern two-thirds of the site into a small creek that flows southeastward into Sherman Inlet (see Figure 1-1).

Site 3 contains at least eight different burn areas. The two northernmost burn areas are currently being used for training exercises (see Figure 1-2). A complete site description and history are presented in the Group J work plan.

The purpose of the Phase I investigation was to identify principal areas and primary contaminants of concern at the site and to provide recommendations for subsequent phases of investigation. The Phase I fieldwork included a site reconnaissance, habitat/biota survey, surface emissions survey and particulate air screening, geophysical survey, utilities survey, soil headspace survey, and the collection and analysis of surface water, sediment, soil, and groundwater samples. In addition, a hydrologic assessment, which included the determination of groundwater and surface water elevations, groundwater flow direction, and hydraulic gradient, was performed at the site. The recommendations for additional work at this site will be incorporated in the revised Group J investigation work plan.

## **2. INVESTIGATION METHODOLOGY**

### **2.1 AERIAL PHOTOGRAPH AND EXISTING DATA ANALYSIS**

Prior to the initiation of fieldwork, E & E personnel examined all available aerial photographs of NAS Pensacola for past and present conditions, features, and developments that might have had direct relevance to the fieldwork methodology. The aerial photograph analysis task involved assembling and stereoscopically analyzing historical photographic imagery and topographic maps available for the site area. Photographs were scaled to allow analysis of past and present surface conditions, drainage, and land use. The aerial photographs used in the analysis are listed in Table 2-1. The photographs were analyzed to obtain information regarding where burning activities were conducted at the site, the evolution of site features that might have affected hydrologic conditions, and to aid in the performance of such tasks as field reconnaissance and monitoring well placement.

### **2.2 SITE RECONNAISSANCE**

A field reconnaissance survey was conducted on and around the site. Available aerial photographs and maps were used as guides in locating surface features. Visual inspections were made of surface conditions, stressed vegetation, surface drainage patterns, areas of exposed site debris, and areas of soil discoloration. These observations of surface conditions on the site were used to update the site map. During the reconnaissance survey, the field team identified areas which presented the most suitable conditions for the establishment of survey grid baselines. The use of a grid system as part of the Phase I field investigation is discussed in the following sections; the actual grid system established at Site 3 is described in Section 2.5.

Table 2-1

PHOTOGRAPHS AND MAPS USED IN THE AERIAL PHOTOGRAPH ANALYSIS  
NAS PENSACOLA SITE 3

Source	Photograph/Map Number	Date	Scale
NAS Pensacola Public Works Department	1276918	7/1/88	1:2,400
	1276919	9/29/86	1:2,400
Florida Department of Transportation	PD-3886-11-02	10/26/89	1:24,000
	PD-3886-11-03	10/26/89	1:24,000
	PD-3886-168C	10/89	1:2,400
	PD-3886-169B	10/89	1:2,400
	PD-3618-11-03	11/21/86	1:24,000
	PD-3618-11-04	11/21/86	1:24,000
	PD-3109-11-03	9/22/83	1:24,000
	PD-3109-11-04	9/22/83	1:24,000
	PD-3109-11-05	9/22/83	1:24,000
	PD-2684-10-03	3/9/81	1:24,000
	PD-2684-11-03	3/9/81	1:24,000
	PD-2684-11-04	3/9/81	1:24,000
	PD-2684-11-05	3/9/81	1:24,000
	PD-1888-10-03	4/28/76	1:24,000
	PD-1888-10-04	4/28/76	1:24,000
	PD-1888-10-05	4/28/76	1:24,000
	PD-1331-10-05	5/4/73	1:24,000
	PD-868-4-07	4/6/70	1:24,000
	PD-616-7-04	3/25/68	1:24,000
	PD-285-4-05	10/8/64	1:12,000
	PNS-7054-1-2	10/12/61	1:24,000
U.S. Department of Agriculture	CPF-1V-199	1/3/58	1:24,000

14[NASP]UH8039:T0361/681/23

Source: Ecology and Environment, Inc., 1991.

The reconnaissance survey team utilized radiation and air monitoring equipment during walkovers of site areas, in accordance with Section 6.1.1 of the GQAPP. Areas with readings above background were located, flagged, and identified on a site map for future reference. All findings of the physical reconnaissance were mapped in detail and recorded in the field logbook.

### **2.3 HABITAT/BIOTA SURVEY**

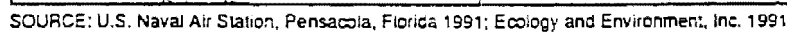
A habitat/biota survey was conducted for the site, as well as an evaluation of applicable literature pertaining to NAS Pensacola. During the physical reconnaissance, an E & E biologist/ecologist determined the on-site terrestrial and aquatic habitats and the surrounding habitats that could be affected by off-site contaminant migration. During the walkover survey, rare, threatened, and endangered species and their potential habitats were identified, and general site conditions were evaluated regarding the site's ability to support viable populations of plants and animals.

### **2.4 OVA SURFACE EMISSIONS SURVEY AND PARTICULATE AIR SCREENING**

Following the establishment of the survey grid network (discussed in Section 2.5), a surface emissions survey was conducted using an organic vapor analyzer (OVA). The survey was conducted in accordance with Section 6.1.1 of the GQAPP. Measurements were made at each established grid point, and readings were recorded in the field logbook. In addition, preliminary air screening was conducted with a particulate monitor to determine if the site represents a source of airborne particulates. The particulate air screening was conducted in accordance with Section 6.1.1 of the GQAPP. Figure 2-1 presents the particulate air screening locations at Site 3.

### **2.5 GEOPHYSICAL SURVEY**

Magnetometer and electromagnetic terrain conductivity surveys were conducted at the site and surrounding local areas. The magnetometer survey was conducted using a Geometrics G-856AX proton precession magnetometer, and the electromagnetic terrain conductivity survey was conducted using a Geonics, Ltd. EM-31 instrument. (The electromagnetic



0 100 200 400 600 800 FEET

terrain conductivity survey is referred to in this report as the EM-31 survey.) The EM-31 conductivity instrument measures the apparent terrain conductivity, allowing quick screening for changes in terrain conductivity potentially associated with buried utilities, buried metallic objects, or changes in soil conditions due to variations in lithology, water content, or the presence of leachate plumes. The EM-31 has a fixed intercoil spacing of 12.1 feet which yields an effective exploration depth of approximately 19.7 feet in the vertical dipole (deep) mode. Operation of the EM-31 in the horizontal dipole (shallow) mode yields an effective exploration depth of approximately 9.8 feet.

The survey effort required the initial establishment of a grid system over the study area. To construct the grid, baseline transects were established using a transit survey instrument and flagged at 50-foot intervals. The site was then gridded relative to the baseline transects with spacings based on 50-foot centers. The grid system was completed relative to an arbitrarily established origin point using a Brunton compass and tape measure. Grid points were flagged and numbered as follows:

Grid X, N  $n_1$  + yy, W  $n_2$  + zz,

where:

X = Grid designation;

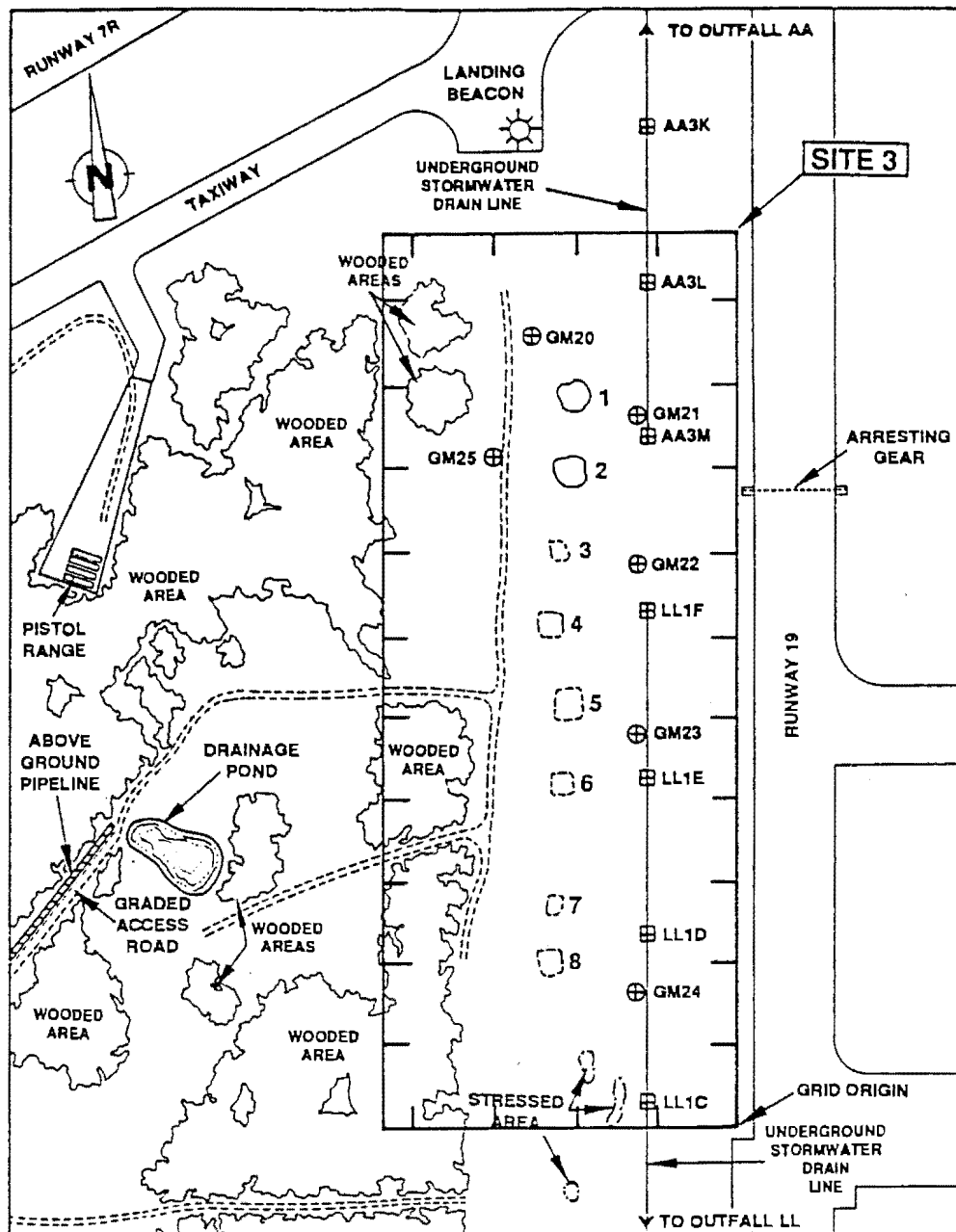
$n_1$  = Distance in 100-foot increments north (N)  
from the origin point;

$n_2$  = Distance in 100-foot increments west (W)  
from the origin point;

yy = Additional distance in feet north from the nearest  
previously located 100-foot increment from the  
grid origin; and

zz = Additional distance in feet west from the nearest  
previously located 100-foot increment from the  
grid origin.

In the case of grid points located at even 100-foot increments from the origin, yy and zz = 00 (e.g., N1+00, W4+00 refers to the grid point located 100 feet north and 400 feet west of the origin point). Figure 2-2 shows the location of the survey grid and origin point established on Site 3 and surrounding areas. The EM-31 and magnetometer surveys



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

**KEY:**

== Jeep Trail

Stormwater Catch Basin with Grate

AA3K/LL1C Stormwater Catch Basin Designation

Active Burn Area

Former Burn Area

1 Burn Area Number

Existing Permanent Shallow Monitoring Well

GM21 Permanent Monitoring Well Number

Survey Grid Boundary

**Figure 2-2 SURVEY GRID MAP — NAS PENSACOLA SITE 3**

were conducted by obtaining measurements at each 50-foot interval grid point. At each grid point, measurements were recorded along north-south and east-west instrument orientations for both the horizontal coplanar and vertical coplanar modes during the EM-31 survey.

The geophysical survey was performed in accordance with field methodologies and data interpretation techniques discussed in Section 6.2 of the GQAPP.

## **2.6 UTILITIES SURVEY**

Prior to conducting any augering, boring, or drilling, E & E located all underground cables, pipes, utilities, and other subsurface features that could potentially be damaged, create a safety hazard, or otherwise hinder fieldwork. The appropriate authorities (e.g., NAS Pensacola Public Works and Southern Bell) were contacted to identify the location of all underground utilities in the site area. In addition, E & E examined available maps and documents to determine the potential presence of any other potentially hazardous subsurface features on site. The locations of all underground utilities and other obstructing features were marked with surveyor flags, fluorescent paint, or by other methods, as appropriate.

## **2.7 SOIL HEADSPACE SURVEY**

To provide information on the presence and extent of soil contamination and to aid in the placement of soil borings and temporary monitoring wells, a soil headspace survey was conducted at Site 3, in accordance with the procedures described in Section 6.4 of the GQAPP. A total of 184 soil borings were completed at survey grid points spaced at 100-foot intervals from the survey grid origin, using stainless steel hand augers and a portable drill rig equipped with 4-inch outside diameter (OD) solid-stem augers. Each boring was completed to a depth just penetrating the water table, which was located 0.3 feet to 5 feet below land surface (BLS) across most of Site 3. Because the water table was present at a depth of 5 feet BLS or less at all but four boring locations, where the depth to the water table was 5.5 to 6.5 feet BLS, only one composite soil headspace sample was collected at each Site 3



boring location. Consequently, all Site 3 soil headspace samples were collected from a single depth interval, assigned the letter designation A (A interval = land surface to 5 feet BLS or land surface to the water table).

Soil headspace samples were collected from the bucket portion of the hand auger or directly from the solid-stem auger flights as the auger or auger flights were withdrawn from the borehole. The sample aliquots were composited using stainless steel implements. The composite soil samples were then sealed in 16-ounce jars, leaving a headspace volume of approximately 50%.

After the samples had equilibrated to a temperature between approximately 20°C and 30°C, an OVA was employed to analyze the soil vapors. Each composite sample was screened using the OVA in survey mode to determine the total organic vapor concentration in the soil. A volume of soil vapor from each sample was also injected into the granular activated carbon chamber of the OVA to screen for the presence of methane. Following collection of the soil headspace sample, the borehole was checked for free product with a Solinst oil/water interface probe.

Detailed records of the boring locations and OVA readings (unfiltered and filtered/methane) were recorded in the field logbook. Borehole cuttings were backfilled into the borehole upon completion of sampling. All drilling and soil sampling equipment was thoroughly decontaminated prior to drilling each borehole and before collecting the soil headspace samples according to the procedures described in Section 6.10 of the GQAPP.

## **2.8 DATA ANALYSIS**

Information obtained from the results of the above-described physical surveys was given primary consideration in the development of placement strategies for the Phase I soil borings, temporary monitoring wells, surface water samples, and sediment samples. Prior to establishing the Phase I temporary monitoring well locations or other sampling points, the results of the aerial photograph analysis, site reconnaissance, surface emissions survey and particulate air screening, geophysical survey, utilities survey, and soil headspace

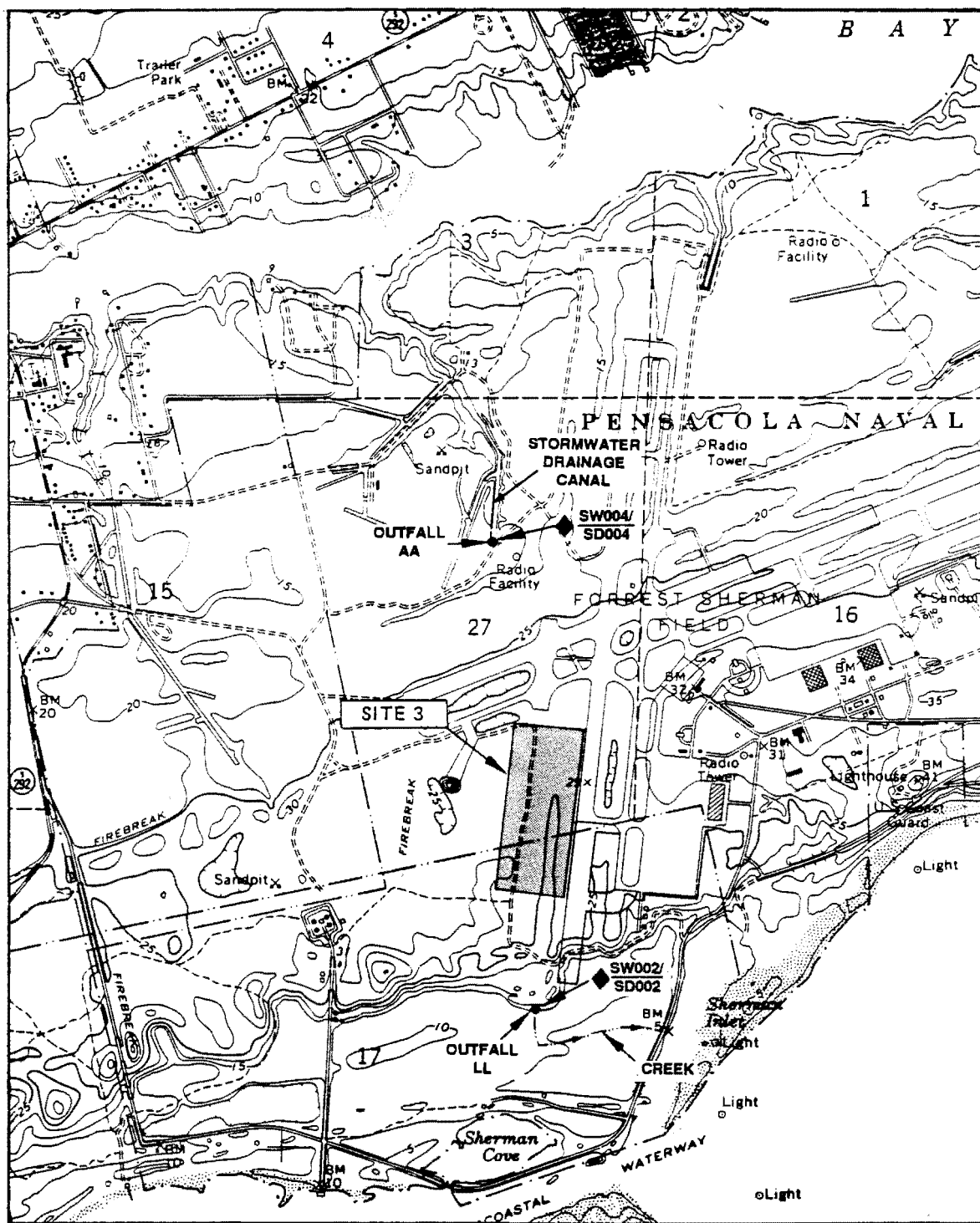
survey were evaluated to identify potential areas of surface or subsurface contamination, areas of stressed vegetation or soil discoloration, and burn area boundaries. The proposed Phase I temporary monitoring well locations and other sampling points, shown on Figure 14-2 of the work plan, were then revised, as appropriate, upon approval by Southern Division.

## **2.9 SURFACE WATER SAMPLING**

Four surface water samples, plus one duplicate sample, were collected during the Phase I investigation: one each from stormwater catch basins AA3M and LL1F, one from stormwater outfall AA located approximately 2,200 feet northwest of the northern site boundary, and one from stormwater outfall LL located approximately 1,500 feet south of the southern site boundary (see figures 2-1 and 2-3). Where the water depth was greater than 1 foot (outfall AA), surface water samples were collected from a zone extending from the water surface to immediately above the bottom using a teflon bailer. Where the water depth was less than 1 foot (outfall LL and both catch basins), samples were collected from a zone extending from the water surface to immediately above the bottom using stainless steel bowls. All sampling and equipment decontamination activities were conducted in accordance with sections 6.9.1 and 6.10 of the GQAPP. All surface water samples were shipped to E & E's Analytical Services Center (ASC) in Buffalo, New York, and analyzed for the screening parameters listed in Table 2-2.

## **2.10 SEDIMENT SAMPLING**

Four sediment samples, plus one duplicate sample, were collected during the Phase I investigation: one each from stormwater catch basins AA3M and LL1F, one from stormwater outfall AA located approximately 2,200 feet northwest of the northern site boundary, and one from stormwater outfall LL located approximately 1,500 feet south of the southern site boundary (see figures 2-1 and 2-3). At each location, the sediment sample was collected from the sediment surface to a depth of approximately 4 inches. Where the water depth was greater than 8 inches (outfall AA), the samples were retrieved using a staff-mounted polypropylene cup. Where the water depth was less than 8 inches



SOURCE: U.S.G.S. 7.5 Minute Series (Topographic) Quadrangles: Fort Barrancas, Fla. 1970 and West Pensacola, Fla. 1970, Photorevised 1987; Ecology and Environment, Inc., 1991

**KEY:**

◆ Surface Water and Sediment Sample Location

SW001 Surface Water Sample Number

SD001 Sediment Sample Number

**SCALE**

0 1/4 1 MILE

0 .5 1 KILOMETER

**Figure 2-3 OFF-SITE SURFACE WATER AND SEDIMENT SAMPLING LOCATIONS — NAS PENSACOLA SITE 3**

**Table 2-2**  
**SAMPLING AND ANALYTICAL SUMMARY**  
**NAS PENSACOLA SITE 3**

Medium	No. of Samples	Duplicates	Total	Analytical Suite <sup>a,b</sup>
Surface Water	4	1	5	A
Sediment	4	1	5	A
Soil	34	2	36	A
Groundwater <sup>d</sup>	12	1	13	A

Medium	No. of Samples	Duplicates	Trip Blanks <sup>f</sup>	Field Blanks	Rinsate Blanks <sup>g</sup>	Preservative Blanks <sup>h</sup>	Total	Analytical Suite <sup>a,c</sup>
Groundwater <sup>e</sup>	4	1	1	1	1	1	9	B

[NASP]UH8039:T0361/671/14

Key:

<sup>a</sup>Analytical suite designations are as follows:

A = Volatile organic compounds (VOCs) including chlorobenzene, polynuclear aromatic hydrocarbons (PAHs), phenols, pesticides, and total polychlorinated biphenyls (PCBs), total recoverable petroleum hydrocarbons (TRPHs), and metals (total, unfiltered).

B = Target Compound List (TCL) VOCs plus xylene and ketones (EPA 8240), TCL base/neutral and acid extractable organic compounds (BNAs; EPA 8270), TCL pesticides and PCBs (EPA 8080), TRPHs (EPA 418.1), Target Analyte List (TAL) metals (total [i.e., unfiltered] and dissolved [i.e., millipore-filtered]; EPA 6010/7060/7421/7471/7740/7841), cyanide (EPA 9010), total organic carbon (EPA 415.1), hardness (water only; EPA 130.2), and alkalinity (water only; EPA 310.1).

<sup>b</sup>Specific constituents encompassed by the various chemical groups included within analytical suite A are identified in tables 9-1 through 9-4 of the GQAPP.

<sup>c</sup>Specific constituents encompassed by the various chemical groups included within analytical suite B are identified in tables 9-5 through 9-13 of the GQAPP.

<sup>d</sup>Groundwater samples and analyses shown are for temporary wells only.

<sup>e</sup>Groundwater samples and analyses shown are for existing permanent wells.

<sup>f</sup>Trip blank analyzed for TCL VOCs only.

<sup>g</sup>Rinsate blank analyzed for total and dissolved TAL metals, cyanide, TRPHs, TCL VOCs, TCL BNAs, TCL pesticides and PCBs, and total hardness.

<sup>h</sup>Preservative blanks analyzed for total TAL metals, cyanide, TRPHs, and TCL VOCs.

Source: Ecology and Environment, Inc., 1991.

(outfall LL and both catch basins), a stainless steel trowel was used. The composition of bottom materials retrieved during sampling was recorded in the field logbook. All sediment sampling and equipment decontamination activities were conducted in accordance with sections 6.9.2 and 6.10 of the GQAPP. All sediment samples were shipped to E & E's ASC and analyzed for the screening parameters listed in Table 2-2.

#### **2.11 SOIL BORINGS AND TEMPORARY MONITORING WELL INSTALLATION**

Thirty-four soil borings were completed at Site 3 (see Figure 2-1). At each boring location, a composite soil sample was collected over a single depth interval from land surface to the water table. Because the water table was present at a depth of 5 feet BLS or less at all but four boring locations (B006, B011, B022, and B034) where the depth to the water table was 5.5 to 6.5 feet BLS, only one composite soil sample was collected at each Site 3 boring location. Consequently, all Site 3 soil samples were collected from a single depth interval, assigned the letter designation A (A interval = land surface to 5 feet BLS or land surface to the water table). Samples were collected using either hand-operated bucket augers or a solid-stem auger powered by a drill rig. Lithologic characteristics of the materials encountered in each borehole were recorded in the field logbook. All sampling, compositing, and lithologic logging activities were performed in accordance with Section 6.6 of the GQAPP. Equipment decontamination was performed in accordance with Section 6.10 of the GQAPP.

Temporary, stainless steel monitoring wells were installed in 12 of the 34 soil borings (see Figure 2-1). Each well was constructed with 5 feet of 0.01-inch slotted screen and installed to a depth that allowed the well screen to bracket the water table. Lithologic characteristics of materials encountered during installation of the wells were recorded in the field logbook in accordance with Section 6.6 of the GQAPP. All equipment decontamination activities were performed in accordance with Section 6.10 of the GQAPP.

## **2.12 SOIL SAMPLING**

Thirty-four soil samples, plus two duplicate samples, were collected as described in Section 2.11, in accordance with Section 6.6.2 of the GQAPP. All soil samples were shipped to E & E's ASC and analyzed for the screening parameters listed in Table 2-2.

## **2.13 GROUNDWATER SAMPLING**

### **2.13.1 Temporary Monitoring Wells**

Twelve groundwater samples, plus one duplicate sample, were collected from the 12 temporary monitoring wells shown on Figure 2-1. Weather conditions; water levels; purge volumes; and groundwater pH, specific conductance, and temperature measurements were recorded in the field logbook prior to sampling. In addition, prior to purging, each well was checked for the presence of floating and/or sinking immiscible hydrocarbons using a Solinst oil/water interface probe. Each groundwater sample was collected immediately following well purging. All well purging and sampling activities were performed in accordance with Section 6.8 of the GQAPP. Equipment decontamination was performed in accordance with Section 6.10 of the GQAPP. All groundwater samples collected from the temporary monitoring wells were shipped to E & E's ASC and analyzed for the screening parameters listed in Table 2-2.

### **2.13.2 Existing Permanent Monitoring Wells**

Four groundwater samples, plus one duplicate sample, were collected from four (GM21, GM23, GM24, and GM25) of the six existing permanent shallow monitoring wells located on Site 3 (see Figure 2-1). The fifth and sixth wells (GM20 and GM22) could not be sampled due to severe damage that prevented a bailer being lowered into them. Weather conditions; water levels; purge volumes; and groundwater pH, specific conductance, and temperature measurements were recorded in the field logbook prior to sampling. Each groundwater sample was collected immediately following well purging. All well purging and sampling activities were performed in accordance with Section 6.8 of the GQAPP. Equipment decontamination was performed in accordance with Section 6.10 of the GQAPP. All groundwater samples collected from the existing wells

were analyzed according to U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP) protocol for the Target Analyte List (TAL), Target Compound List (TCL), and other parameters listed in Table 2-2.

#### 2.14 HYDROLOGIC ASSESSMENT

The hydrologic assessment of the site and surrounding areas included a wellhead elevation survey of the temporary monitoring wells; static water level measurements and determination of water level elevations in both the temporary monitoring wells and the existing permanent shallow monitoring wells; and determination of surface water elevations at four locations within the drainage swale.

Wellhead top-of-casing (TOC) elevations for the temporary monitoring wells were measured relative to the top of a driven reference stake located adjacent to each well using a spirit level and tape measure. Following groundwater sampling and removal of the temporary monitoring wells, the elevations of the driven reference stakes were surveyed using a transit with reference to the permanent monitoring well GM21 TOC elevation. Surface water elevations were also referenced to the well GM21 TOC elevation.

Wellhead TOC elevations and static water levels measured in each existing permanent well were referenced directly to the established benchmark (GM21 TOC). Static water levels in the permanent monitoring wells were measured and surface water elevations surveyed on July 30, 1991. Static water levels in the temporary monitoring wells were measured over a 4-day period (July 23 through 26, 1991). The static water level data were used to determine the water table elevation, groundwater flow direction, and horizontal hydraulic gradient for the shallow surficial zone of the Sand-and-Gravel Aquifer in the site vicinity.

#### 2.15 FIELD QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

All field tasks performed during the investigation were documented in the field logbooks according to the procedures specified in Section 7.2 of the GQAPP.

### **2.15.1 Field QA/QC Samples**

Field QA/QC samples were prepared for all samples collected at the site during the Phase I investigation according to the procedures described in Section 6.12 of the GOAPP. Chain-of-custody was maintained for all samples collected, packaged, and shipped to E & E's ASC for analysis. Sample management was performed as specified in Section 7 of the GOAPP. The collected field QA/QC samples and corresponding analytical parameters are listed in Table 2-2.

### **2.15.2 Decontamination Procedures**

All equipment used during field activities was decontaminated in accordance with Section 6.10 of the GOAPP.

## **2.16 INVESTIGATION-DERIVED WASTE MANAGEMENT**

Excess soil generated during soil boring and temporary monitoring well installation activities was temporarily contained adjacent to the well or boring and then backfilled into the borehole after the auger flights or temporary well casings had been removed following sample collection. Any soil material remaining after completion of borehole backfilling was placed in 55-gallon drums, sealed, labeled, and moved to a central area on the site. Each drum had a painted-on label listing the site number and the type of material contained in the drum.

All water generated during development and purging of the temporary monitoring wells was temporarily contained adjacent to the well and then discharged back into the well following collection of samples.

All water generated during purging of the existing permanent monitoring wells was placed in 55-gallon drums, sealed, labeled, and moved to a central area on the site. Each drum had a painted-on label listing the site number and the type of material contained in the drum.

Potentially contaminated, personal protective clothing and disposable materials, wastes generated during decontamination activities, and other potentially contaminated, investigation-derived materials were placed in 55-gallon drums, labeled, and moved to a central area on the site. These drums were sealed and labeled "hot trash." All drummed investigation-derived materials were subsequently picked up and disposed of by NAS Pensacola.



### 3. RESULTS

#### 3.1 AERIAL PHOTOGRAPH AND EXISTING DATA ANALYSIS

Review of the January 3, 1958, aerial photograph indicated that Site 3 appeared then much as it does at present. The site was bordered by Sherman Field on the north and east, by a grassy field on the south, and by scattered scrub and trees on the west. In addition, the drainage swale that transects the site near its eastern boundary and the unpaved access road and jeep trail that transect the western portion of Site 3 were also present.

Review of the October 12, 1961, aerial photograph indicated that crash crew training (burning) activities were likely being conducted on Site 3 at the location of burn area 1 (see Figure 1-2). The photograph reveals small objects that resemble storage tanks or drums and small, barren/stressed areas that extend southwestward from burn area 1 to the jeep trail.

Review of the October 8, 1964, aerial photograph indicated that burn areas 2, 3, 4, 5, and 8 (see Figure 1-2) were in existence. Burning activities appear to have been confined to burn areas 4 and 5 at the time the photograph was taken; however, burn area 1 was surrounded by an approximately 100-foot-wide, barren, apparently stressed area. Several tank-like objects are visible west and south of burn area 1 in the area east of the jeep trail. In addition, several small objects that could be tanks or drums were present in the location of burn area 3 (see Figure 1-2).

Review of the March 25, 1968, aerial photograph indicated that burn areas 6 and 7 existed by this time. The photograph reveals that burn areas 1 through 5 were probably active and that burn areas 6 through 8 were likely inactive. Barren, stressed areas appear to have surrounded

burn areas 1 through 5. In addition, the stressed areas surrounding burn areas 1 and 2 appear to have extended eastward several hundred feet toward the drainage swale transecting the eastern portion of Site 3.

Review of the April 6, 1970, aerial photograph revealed that burn areas 1 through 6 appear to have been in use during the period between the March 25, 1968, and the April 6, 1970, aerial photographs. The photograph also indicates that only burn areas 1 and 2 were active at the time the April 6, 1970, photograph was taken. Areas of apparently stressed vegetation were present surrounding burn areas 1 through 6. The photograph reveals that approximately 10 tank-like objects and two or more airplanes were present along a section of the jeep trail extending from approximately 200 feet south of burn area 6 northward to the vicinity of burn area 1.

Review of the May 4, 1973, aerial photograph indicated that burning activities were likely being conducted only at burn areas 1 through 3. Burn areas 4 through 8 appear to have been inactive at this time. The photograph reveals that extensive stressed areas surrounded burn areas 1, 2, and 3 and extended eastward approximately 200 feet to the drainage swale, suggesting that surface runoff on the western side of Site 3 was eastward toward the drainage swale. The sizes of the stressed areas associated with burn areas 4 through 6 appear to have decreased in the time interval between the April 6, 1970, and May 4, 1973, aerial photographs.

Review of the April 28, 1976, aerial photographs suggested that burn areas 1 and 3 were active at this time. The stressed areas surrounding burn areas 1 through 3 appeared much as they did in the May 4, 1973, aerial photograph. By the time the April 28, 1976, aerial photographs had been taken, a tanker-trailer (confirmed by visual inspection during the site reconnaissance) was present adjacent to the jeep trail, approximately 100 feet due west of burn area 1.

Review of the March 9, 1981, aerial photographs indicated that burning activities were likely being conducted only in burn areas 1 and 2; however, burn areas 4 and 5 appeared to have been in recent use. Burn areas 3 and 6 through 8 appeared to be inactive at this time. In addition, the stressed areas that extended eastward to the Site 3 drainage swale from the vicinity of burn areas 1, 2, and 3 visible in

the May 1973 and April 1976 photographs were still visible in the March 1981 aerial photographs. Stressed areas surrounding burn areas 4 and 5 were also visible. The aerial photographs also reveal that linear piles of large, anchor chain (identified by visual inspection during the site reconnaissance) were present near the eastern side of the jeep trail, approximately 150 feet southwest of burn area 8 and immediately south of the southern site boundary.

Review of the September 22, 1983, aerial photographs indicated that burning activities were being conducted on burn areas 1, 2, and 3. Burn areas 4 through 8 appear to have been inactive. The stressed areas associated with burn areas 1 through 5 were still visible in the October 1983 aerial photographs.

Review of the November 21, 1986, aerial photographs indicated that burning activities at Site 3 were confined to burn areas 1 and 2. The site appeared much as it did at the time of the September 22, 1983, aerial photographs.

Review of aerial photographs subsequent to the 1986 aerial photographs revealed no other obvious changes on the site. It should be noted that burning activities have continued at burn areas 1 and 2 up to the present.

### **3.2 SITE RECONNAISSANCE**

During the site reconnaissance, a visual inspection was made of Site 3, the area of scattered scrub and trees that borders the site on the west, and the grassy field that borders Site 3 on the south. All eight burn areas exhibited dark, gray-black soil staining. Stressed vegetation was present within, or adjacent to, each of the eight burn areas. Sparse vegetation and darkened soils were present in three areas (not revealed by the aerial photograph analysis) located near the southern site boundary (see Figure 1-2).

Steel, aircraft cockpit mock-ups were present in burn areas 1 and 2. An aircraft fuselage was present in burn area 3, and metallic aircraft debris was present in burn areas 4 and 5. In addition, aircraft parts, an old tanker-trailer, portable foam tanks, and other metallic debris were observed along the western side of the jeep trail that extends from the unpaved access road northward through the

northwestern portion of the site. Exposed and partially buried, isolated pieces of metallic debris were also present over the entire Site 3 area. A small, barren area of soil staining was noted adjacent to an aircraft fuselage located on the west side of the jeep trail, approximately 150 feet north of the unpaved access road.

Site 3 is relatively flat; however, land surface at the site slopes gently toward a shallow north-south oriented drainage swale that transects the site approximately 200 feet west of the site's eastern boundary along Sherman Field runway 19 (see Figure 1-2). Surface soils present at Site 3 are composed of clean quartz sands.

The shallow swale coincides with the location of a stormwater runoff drainage system consisting of two stormwater drainage lines that capture and transmit surface runoff from Site 3 (see Figure 1-2). Surface runoff from approximately the northern third of the site is captured by stormwater drainage line AA (see Figure 1-2) and discharged approximately 2,200 feet northwest of the site (at outfall AA) to an approximately 25-foot-wide canal that also receives stormwater runoff from other portions of Sherman Field, flows to the north-northwest, and empties into Bayou Grande (see Figure 2-3). Surface runoff from the southern two-thirds of Site 3 is captured by stormwater drainage line LL (see Figure 1-2) and discharged approximately 1,500 feet south of the site (at outfall LL) to a shallow, approximately 3-foot-wide creek that flows southeastward and empties into Sherman Inlet (see Figure 2-3).

A stressed area of soil staining surrounds burn areas 1 and 2 and extends eastward to the vicinity of the swale that transects the site. Hydrocarbon odors and readings of up to 20 parts per million (ppm) above background levels (0 ppm) detected by an HNu air monitoring device were noted in burn areas 1 and 2 and in the barren, stained areas extending eastward from these burn areas toward the swale located on the site. In addition, during performance of the surface emissions survey, oily sheens were noted on standing water within the swale in areas opposite of and extending approximately 400 yards south of burn areas 1 and 2. When disturbed, water-logged soils in the above-described barren area and in the swale adjacent to burn areas 1 and 2 produced oily sheens in nearby standing water.

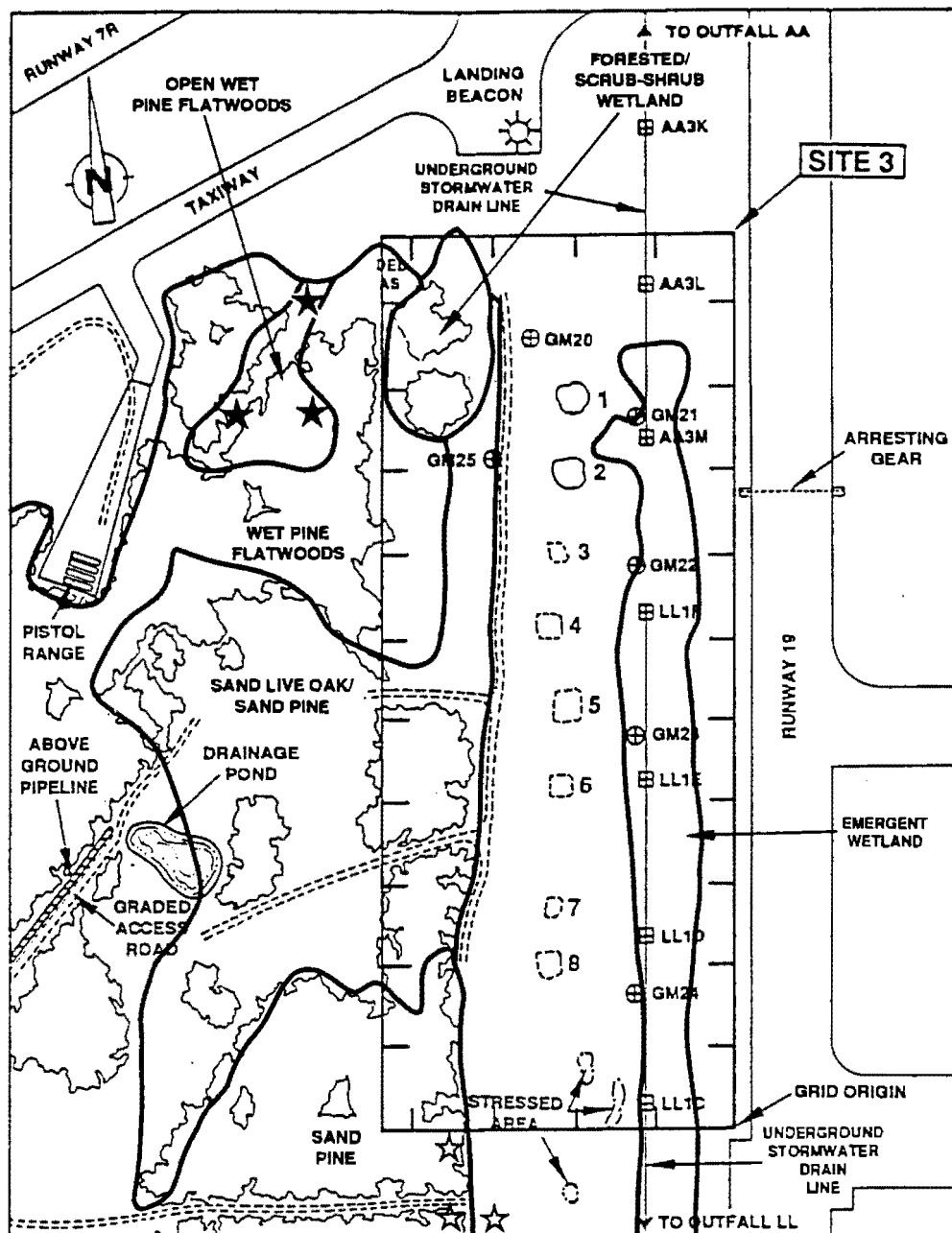
### 3.3 HABITAT/BIOTA SURVEY

The habitat/biota survey addressed several habitats located on or adjacent to Site 3. A majority of the site may be characterized as upland habitat, more specifically an open field, including several burn pits. Dominant plant species include bahia grass (Paspalum notatum), lovegrass (Eragrostis sp.), broomsedge (Andropogon virginicus), and (Panicum sp.), with lesser amounts of goatweed (Scoparia dulcis), rabbit tobacco (Gnaphalium purpureum), Venus' looking glass (Specularia perfoliata), dewberry (Rubus trivialis), yaupon (Ilex vomitoria), Wahlenbergia (Wahlenbergia marginata), dwarf dandelion (Krigia virginica), toadflax (Linaria canadensis), rustweed (Polypremum procumbens), and coinwort (Centella asiatica). The cutover upland area that borders the western perimeter of the site is dominated by flat-topped goldenrod (Euthamia minor), catbrier (Smilax rotundifolia), and dewberry (Rubus cuneifolius).

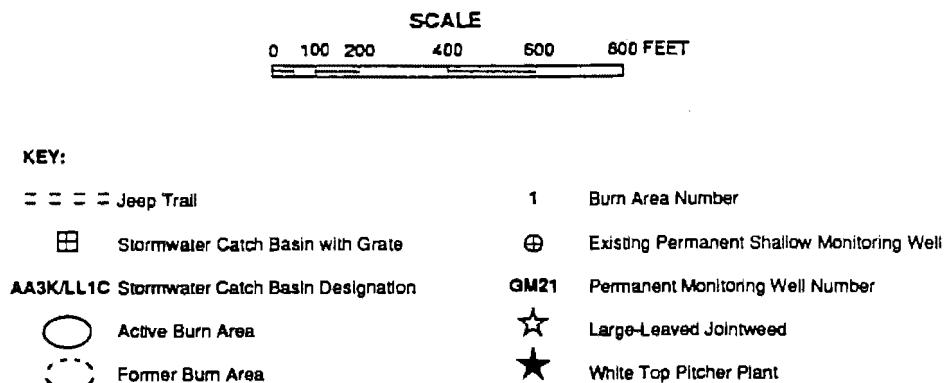
Biota associated with these open areas include a variety of birds, such as killdeer, eastern meadowlark, barn swallow, tree swallow, and boat-tailed grackle. Other biota include snakes, frogs, turtles, and small mammals that may use the area as a travel corridor between the emergent wetland to the east and the pine flatwoods and sand pine scrub community located in the western part of the site. Appendix A presents a complete list of the birds observed at NAS Pensacola during the habitat/biota survey.

Numerous areas in the open field exhibited dark staining in the surficial soil layer.

The ground slopes to the east, and an emergent wetland is located between the burn pits and the edge of runway 19 (see Figure 3-1). The emergent wetland extends from the northernmost burn pit (burn area 1) to the southern boundary of the site and ranges from approximately 100 to 165 feet wide. Dominant plant species include coinwort, spikerush (Eleocharis sp.), violet (Viola lanceolata), and sundew (Drosera tracyi). Other species present include milkwort (Polygala lutea), broomsedge, St. John's-wort (Triadenum virginicum), lovegrass, red root (Lachnanthes caroliniana), colic root (Aletris lutea), chalky bluestem (Andropogon virginicus), clubmoss (Lycopodium sp.), bog buttons (Lachnocaulon anceps), hatpins (Eriocaulon sp.), breakrush (Rhynchospora



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991



**Figure 3-1 HABITAT/BIOTA MAP — NAS PENSACOLA SITE 3**

sp.), daisy fleabane (Erigeron vernus), bantam buttons (Syngonanthus flavidulus), black titi (Cliftonia monophylla), gallberry (Ilex glabra), lizard's tail (Saururus cernuus), stargrass (Hypoxis sp.), dewthreads (Drosera tracyi), wax myrtle (Myrica cerifera), and fuirena (Fuirena scirpoidea).

At the time the survey was conducted, soils were saturated throughout the wetland, and standing water was present in some areas. Water flow was to the north at the southern end of the site and to the south at the northern end. Vegetation east of burn area 3 was coated with a noticeable film. Water on the surface of burn area 4 exhibited an oily sheen. A very strong fuel odor was evident in this area.

An area dominated by sand live oak (Quercus geminata), sand pine (Pinus clausa), rosemary (Conradina canescens), and deer moss (Caldonia sp.) is located in the southwestern portion of the site. Other species present in lesser amounts include long leaf pine seedlings (Pinus palustris), saw palmetto (Serenoa repens), rosemary (Ceratiola ericoides), wild indigo (Baptisia lanceolata), and turkey oak (Quercus laevis).

This area is a potential habitat for the gopher tortoise (Gopherus polyphemus), officially a species of special concern in Florida. Gopher tortoises prefer areas with well-drained, sandy soils coupled with a rather sparse understory and abundant herbaceous groundcover. Two possible gopher tortoise burrows were observed; however, the burrows appeared inactive because debris partially obstructed the openings. The continuation of this habitat past the southern site boundary is the location of three areas populated by large-leaved jointweed (Polygonella macrophylla). This species is considered threatened in Florida and is a federal candidate species. Approximately 50 individuals were identified.

A forested/scrub-shrub wetland is located in the northwestern corner of the site. Dominant species include pond cypress (Taxodium ascendens) and myrtle-leaf holly (Ilex myrtifolia), along with lesser amounts of swamp tupelo (Nyssa biflora) and sweet bay magnolia (Magnolia virginiana). An herbaceous fringe associated with this wetland consists of Virginia chain-fern (Woodwardia virginica), giant plumegrass (Erianthus giganteus), beak rush (Rhynchospora sp.), pond cypress,

myrtle-leaf holly, red root, slash pine (Pinus elliotii), sweet pepperbush (Clethra alnifolia), and catbrier (Smilax bona-nox).

Birds utilizing this habitat include great blue heron, blue jay, rufous-sided towhee, boat-tailed grackle, northern mockingbird, and brown thrasher. A variety of snakes, lizards, frogs, insects, rodents, and other small mammals may utilize the habitat for nesting and/or foraging.

An area of disturbed flatwoods is located on the northwestern side of the site. This area is dominated by wiregrass (Aristida stricta) and gallberry. Other species present include southern magnolia, saw palmetto, catbrier, yellow-eyed grass (Xyris sp.), meadow beauty (Rhexia mariana), yaupon, broomsedge, yellow colic root (Aletris lutea), coinwort, bog buttons, milkwort (Polygala nana), blackberry (Rubus cuneifolius), flat-topped goldenrod, deer's tongue (Carphephorus sp.), dwarf dandelion, brackenfern (Pteridium aguilinum), and rosemary.

Wet pine flatwoods are located adjacent to the disturbed flatwoods community on the northwestern part of the site. The canopy consists of slash pine, sweetbay magnolia, and pond cypress. Sweetbay, pond cypress, and red maple (Acer rubrum) comprise the subcanopy, and the groundcover consists of gallberry, wiregrass, bog buttons, hatpins, slash pine, fetterbush (Lyonia lucida), bamboo-vine (Smilax laurifolia), and white-top pitcher plants (Sarracenia leucophylla). Hundreds of white-top pitcher plants were identified in and near an opening in the pine flatwoods. Notably, this species is listed by the State of Florida as an endangered species. Birds observed in this habitat include blue jay, northern mockingbird, boat-tailed grackle, and marsh wren. Snakes, frogs, salamanders, squirrels, rabbits, and rodents may also utilize this habitat for foraging, nesting, and den construction.

In summary, several habitats were identified on and adjacent to Site 3. Three wetland areas were identified: an emergent wetland near runway 19, a forested/scrub-shrub wetland located in the northwestern corner of the site, and a wet pine flatwoods community located outside the western boundary of the site. A white-top pitcher plant bog is located within the wet pine flatwoods. A sand live oak/sand pine community is located in the southern corner of the site. This habitat is favorable for the gopher tortoise, a species of special concern in



Florida, although none were observed during the survey. Approximately 50 individuals of large-leaved jointweed were observed in three areas immediately south of the southwestern site boundary. One area was directly surrounding a piezometer west of the third firing range box. This species is considered threatened in Florida and is a candidate species for federal protection. An oily sheen was observed on the surface of the water and on the vegetation in the emergent wetland. Numerous areas adjacent to the burn pits exhibited darkly stained surficial soils. A very strong fuel odor was evident in the vicinity of burn area 4. No other impacts from disposal of hazardous waste were evident on Site 3 or adjacent habitats.

#### **3.4 SURFACE EMISSIONS SURVEY AND PARTICULATE AIR SCREENING**

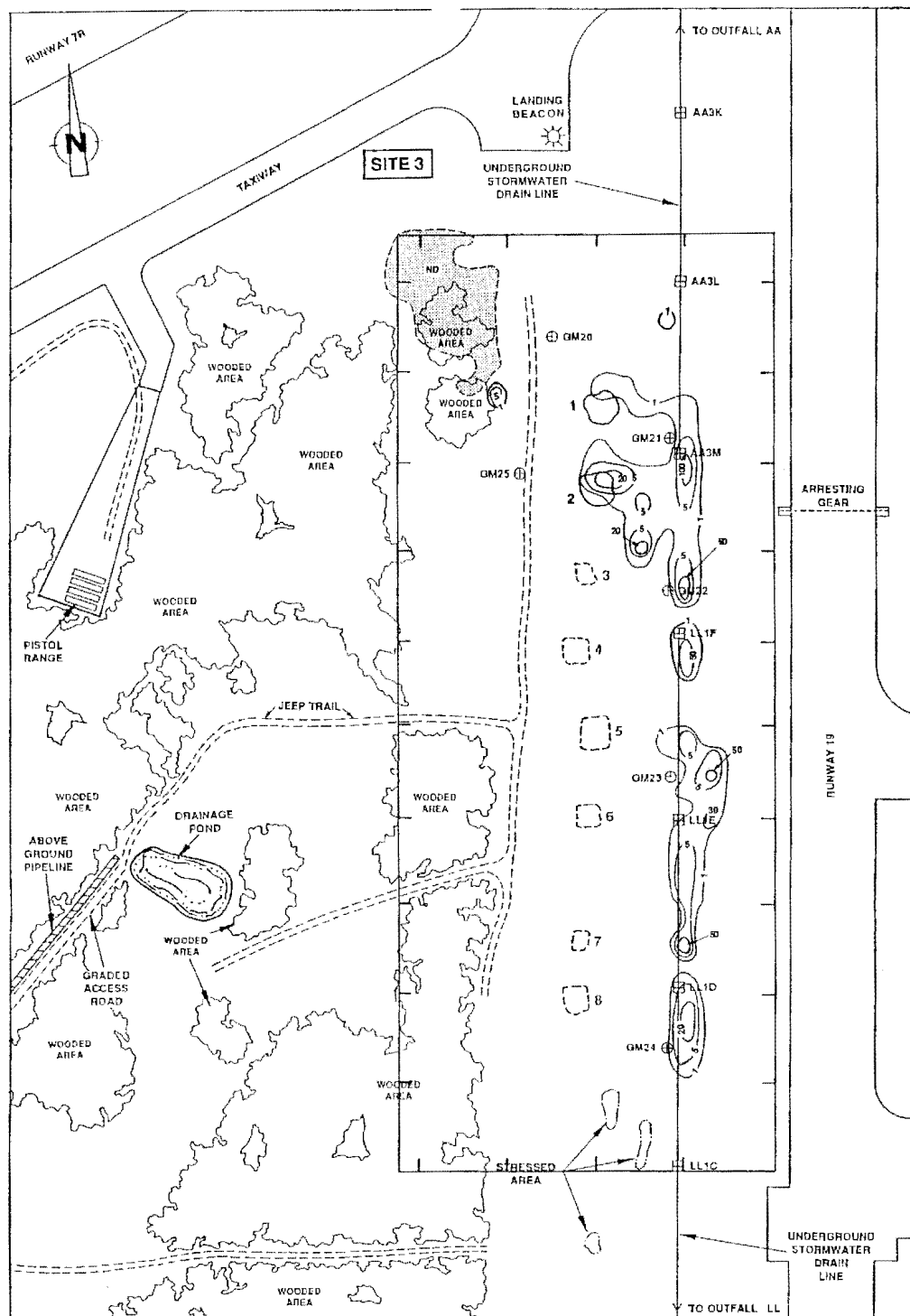
An OVA was used to monitor surface emissions at each grid node at Site 3. Figure 2-2 shows the grid layout of the site. The background OVA reading during the surface emissions survey was 0 ppm. Methane-corrected organic vapor concentrations detected on Site 3 during the surface emissions survey ranged from 0 ppm to 200 ppm. Figure 3-2 shows the locations of elevated surface emission readings detected on Site 3, and Appendix B lists the coordinates and readings recorded at each grid node on Site 3. Background surface emission readings were recorded in the field logbook during performance of the surface emissions survey. An activated carbon filter was used to test for the presence of methane; methane readings were then subtracted from the total organic vapor readings to yield a methane-corrected reading.

Organic vapor concentrations exceeding 1.0 ppm above background levels were detected in six areas of Site 3 (see Figure 3-2). The highest organic vapor concentrations were detected along the swale located in the eastern portion of the site. Organic vapor concentrations (corrected for the presence of methane) of up to 200 ppm were detected in four segments of the swale extending from opposite of burn area 1 southward for approximately 500 yards (see Figure 3-2). The elevated organic vapor concentrations observed in the vicinity of the swale generally correspond to the areas of the swale where hydrocarbon-like sheens were observed on standing water during the site reconnaissance. Elevated organic vapor concentrations of up to 43 ppm were also

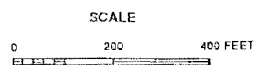
detected in an area extending from burn areas 1 and 2 eastward to the swale (see Figure 3-2) where soil staining and hydrocarbon odors were noted during the site reconnaissance.

A slightly elevated, isolated OVA reading of 7 ppm was detected in a low, damp area located approximately 200 feet due west of burn area 1 where hydrocarbon-like sheens were present. In addition, as illustrated on Figure 3-2, a slightly elevated OVA reading of 1.8 ppm was detected in a wet area approximately 150 feet northeast of burn area 1 and approximately 50 feet west of the swale transecting the site; hydrocarbon-like sheens were present at this location.

On June 6, 1991, a Mini-Ram particulate air monitoring device was used to determine if Site 3 could represent a source of airborne particulates. Figure 2-1 shows the particulate air screening locations on Site 3, and Appendix C presents the particulate air screening data. During the test period, winds at the site were easterly at 5 to 8 miles per hour (mph). Airborne particulates were measured over 5-minute intervals at four locations in the vicinity of Site 3. Measurements were made at the following locations: upwind, 30 feet west of the western edge of runway 19 at the point where the arresting gear is located (UW1; geophysical survey grid point N15+00, W0+00); downwind, 580 feet west of the western edge of runway 19 where the arresting gear is located (DW1; geophysical survey grid point N15+00 W5+50); upwind, 1,000 feet south of and 30 feet west of the western edge of the point where the arresting gear crosses the western side of runway 19 (UW2; geophysical survey grid point N5+00, W0+00); and downwind, 1,000 feet south of and 680 feet west of the western side of runway 19 where it is crossed by the arresting gear (DW2; geophysical survey grid point N5+00, W6+50). Time weighted average (TWA) particulate concentrations measured at these four locations were 0.00 milligram per cubic meter ( $\text{mg}/\text{m}^3$ ), 0.01  $\text{mg}/\text{m}^3$ , 0.01  $\text{mg}/\text{m}^3$ , and 0.00  $\text{mg}/\text{m}^3$ , respectively. The average TWA particulate concentration measured at the two upwind screening locations and at the two downwind screening locations was 0.005  $\text{mg}/\text{m}^3$ . Based on these measured concentrations, Site 3 does not appear to be a source of airborne particulates.



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1981; Ecology and Environment, Inc. 1981



**KEY:**

- |  |   |
|--|---|
| --- Jeep Trail                               | 1 Burn Area Number  |
| Stormwater Catch Basin with Grate            | Existing Permanent Shallow Monitoring Well                    |
| AA3K/LL1C Stormwater Catch Basin Designation | GM21 Permanent Monitoring Well Number                         |
| Active Burn Area                             | Methane-Corrected Organic Vapor Isopleth (ppm)                |
| Former Burn Area                             | ND No Data Available (area under water at time of the survey) |

**Figure 3-2 SURFACE EMISSIONS SURVEY MAP — NAS PENSACOLA SITE 3**

### 3.5 GEOPHYSICAL SURVEY

The results of the magnetometer and EM-31 surveys conducted on Site 3 are discussed in the following sections. Grid coordinates and readings for the magnetometer and EM-31 surveys are presented in Appendix D. Figure 2-2 illustrates the grid system used for the geophysical surveys.

Overall, the results of the geophysical survey indicate that ferrometallic objects and utilities are present in the shallow subsurface (approximately 10 feet BLS or less) beneath Site 3. Anomalous readings for each of the two survey types are generally linear and can be attributed either to the presence of ferrometallic objects or to the presence of subsurface utilities. The EM-31 survey detected anomalously high electromagnetic conductances in several areas of the northwestern corner and the southeastern portion of the site. These anomalies may reflect elevated water table conditions or the presence of subsurface contaminants.

#### 3.5.1 Magnetometer Survey

Figure 3-3 shows the contoured total magnetic field strength values (in units of gammas x 100) observed across Site 3. Background magnetometer readings obtained across Site 3 ranged from 502 to 503 gammas x 100. Magnetometer readings, grid coordinates, and detailed maps of the magnetometer readings recorded on Site 3 are presented in Appendix D.

Moderate ( $\pm 5$  to 10 gammas x 100) to strong ( $> +10$  gammas x 100 or  $< -10$  gammas x 100) magnetic anomalies relative to the regional ambient total magnetic field strength of approximately 50,000 gammas are present on Site 3, indicating that buried ferrometallic material may be present within the boundaries of the site. However, many of the magnetic anomalies observed on site form linear alignments that may be attributable to the presence of subsurface utilities.

Several moderate to strong, positive and negative magnetic anomalies were recorded in the west-central area of Site 3. These anomalies generally lie along a series of three straight lines oriented as follows: north-south, parallel to the western site boundary; east-west, from just north of burn area 5 to the southern end of the

north-south line of anomalies; and southeast-northwest, from just north of burn area 5 to the northern end of the north-south line of anomalies (see Figure 3-3). These three sets of anomalies probably represent the location of subsurface utilities, such as electrical cables or fuel lines, given the linear orientations and, as will be discussed in Section 3.5.2, the fact that EM-31 anomalies were also generally recorded along the same lineaments.

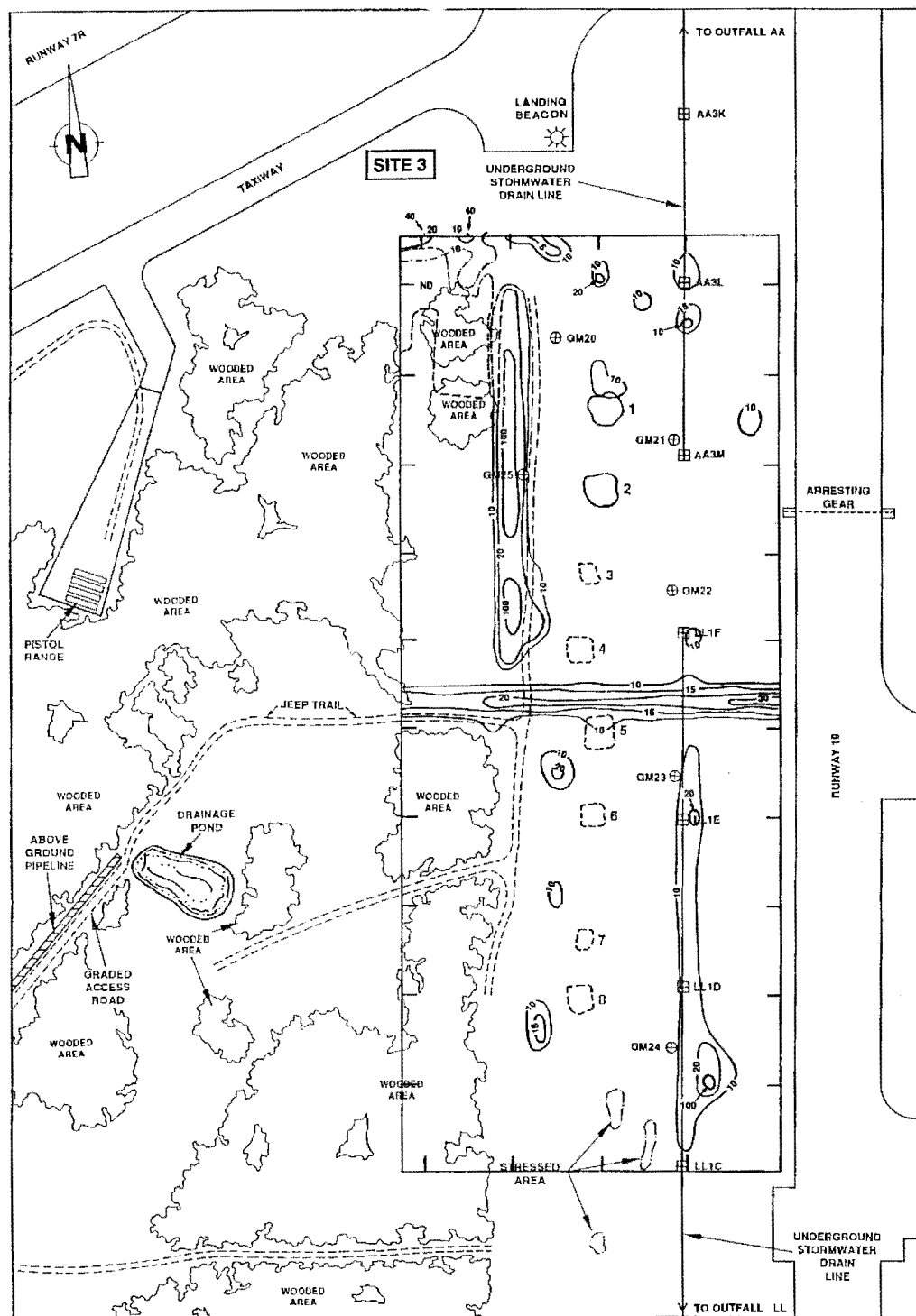
As illustrated on Figure 3-3, a very large (2,100 feet by 400 feet), strong, negative magnetic anomaly was recorded over and adjacent to the drainage swale located near the eastern site boundary. However, given that no EM-31 anomalies were recorded in this area, this large magnetic anomaly appears spurious and is most likely attributable to instrument malfunction.

Several isolated, moderate to strong, positive and negative magnetic anomalies were detected in the southern and east-central areas of Site 3. These anomalies are again generally associated with EM-31 anomalies and probably reflect isolated surface/subsurface ferrometallic debris (southern area) and subsurface utilities associated with flight operations at Sherman Field (east-central area), respectively. Two moderate anomalies were recorded in the vicinity of catch basins LL1D and LL1C, located in the drainage swale near the southern boundary of the site (see Figure 3-3); these anomalies likely reflect the metal grates present on top of catch basins LL1D and LL1C.

### 3.5.2 EM-31 Survey

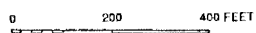
Figures 3-4 and 3-5 summarize the results of the EM-31 survey performed on Site 3. Figure 3-4 identifies areas where anomalous readings ( $\geq 10$  millimhos per meter [mmhos/m]) were recorded in the horizontal [**dipole**] mode (exploration depth of approximately 3 meters [9.8 feet]), and Figure 3-5 identifies areas where anomalous readings ( $\geq 10$  mmhos/m) were recorded in the vertical [**dipole**] mode (exploration depth of approximately 6 meters [19.7 feet]). Background EM-31 readings obtained across the site ranged from 3.5 to 5 mmhos/m. EM-31 readings, grid coordinates, and detailed maps of the EM-31 survey readings are presented in Appendix D.





SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

SCALE

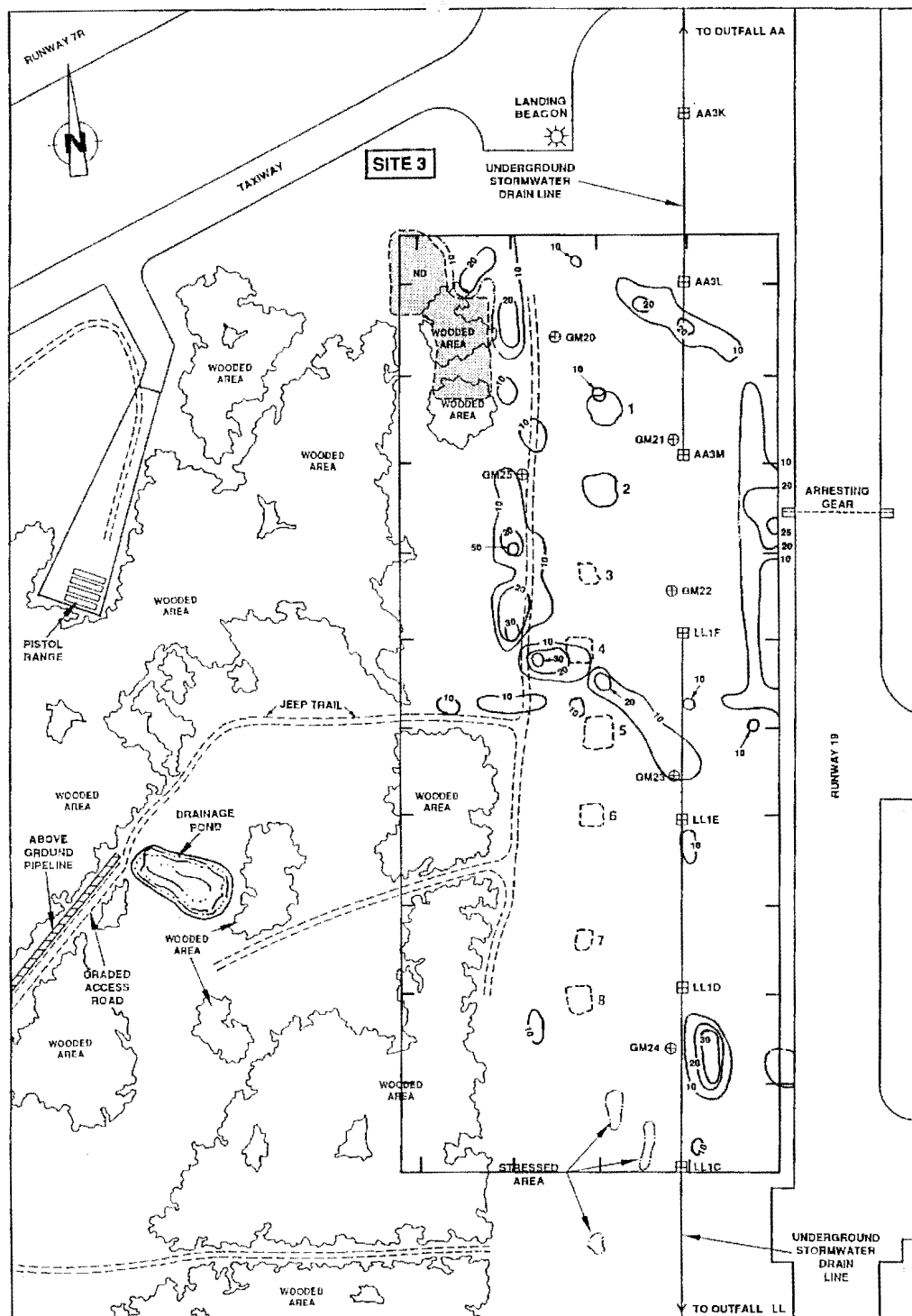


KEY:

- |  |   |
|--|---|
| --- Jeep Trail                               | ⊕ Existing Permanent Shallow Monitoring Well                  |
| ⊠ Stormwater Catch Basin with Grate          | GM21 Permanent Monitoring Well Number                         |
| AA3K/LL1C Stormwater Catch Basin Designation | 10 Electromagnetic Conductance Isopleth (mmhos/m)             |
| ○ Active Burn Area                           | 10 Inferred Electromagnetic Conductance Isopleth (mmhos/m)    |
| ⊖ Former Burn Area                           | ND No Data Available (area under water at time of the survey) |
| 1 Burn Area Number                           |   |

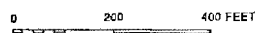
NOTE: Contoured values represent highest observed values from north-south or east-west instrument orientation readings at each grid point.

Figure 3-4 EM-31 SURVEY MAP, HORIZONTAL DIPOLE MODE ---  
NAS PENSACOLA SITE 3



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

SCALE



KEY:

--- Jeep Trail

Stormwater Catch Basin with Grate

AA3K, LL1C Stormwater Catch Basin Designation

Active Burn Area

Former Burn Area

1 Burn Area Number

Existing Permanent Shallow Monitoring Well

GM21 Permanent Monitoring Well Number

10 Electromagnetic Conductance Isoleth (mmhos/m)

ND No Data Available (area under water at time of the survey)

10 Inferred Electromagnetic Conductance Isoleth (mmhos/m)

NOTE: Contoured values represent high-contrast values from north-south or east-west instrument orientation readings at each grid point.

Figure 3-5 EM-31 SURVEY MAP, VERTICAL DIPOLE MODE — NAS PENSACOLA SITE 3



As shown on figures 3-4 and 3-5, linear zones of anomalous electromagnetic conductance are present on Site 3 and generally coincide with the areas where magnetic anomalies were recorded (see Appendix D). EM-31 anomalies in these areas probably reflect the presence of subsurface utilities or ferrometallic objects.

Electromagnetic anomalies not supported by the presence of magnetic anomalies are also present on the site. Figures 3-4 and 3-5 show the presence of a curvilinear set of anomalies that trends northward for approximately 900 feet from the middle of the site adjacent to runway 19 and then turns to the northwest and passes through the northeastern corner of the site. This set of anomalies can be attributed to the presence of an underground high voltage power line. The linear anomaly trending northward along the west side of the jeep trail from near the middle of the site and the linear anomaly trending southward from the middle of the site along the drainage swale (see Figure 3-4) are supported by the presence of magnetic anomalies only over the southern third of each anomaly. These two anomalies are likely attributable to the presence of buried subsurface ferrometallic objects or utilities; however, the possibility that these anomalies may also be partially attributable to the presence of subsurface contaminants cannot be discounted. Alternatively, these anomalies may also represent elevated conductances resulting from increasing proximity of the water table to land surface.

EM-31 anomalies were also recorded in the northwestern corner of the site immediately north of a wet, swampy area; adjacent to the north side of burn area 1; and in two areas adjacent to stormwater catch basins AA3L and LL1F (see figures 3-4 and 3-5). The EM-31 anomaly observed in the northwest corner of Site 3 is probably attributable to an increased proximity of the water table to land surface in this area; however, the possibility that this anomaly may reflect the presence of buried utilities or metallic objects or subsurface contamination cannot be discounted. The anomaly adjacent to burn area 1 may reflect the presence of subsurface contaminants, given the historic use of burn area 1. The anomalies associated with catch basins AA3L and LL1F can probably be attributed to the presence of metal grates overlying each catch basin.

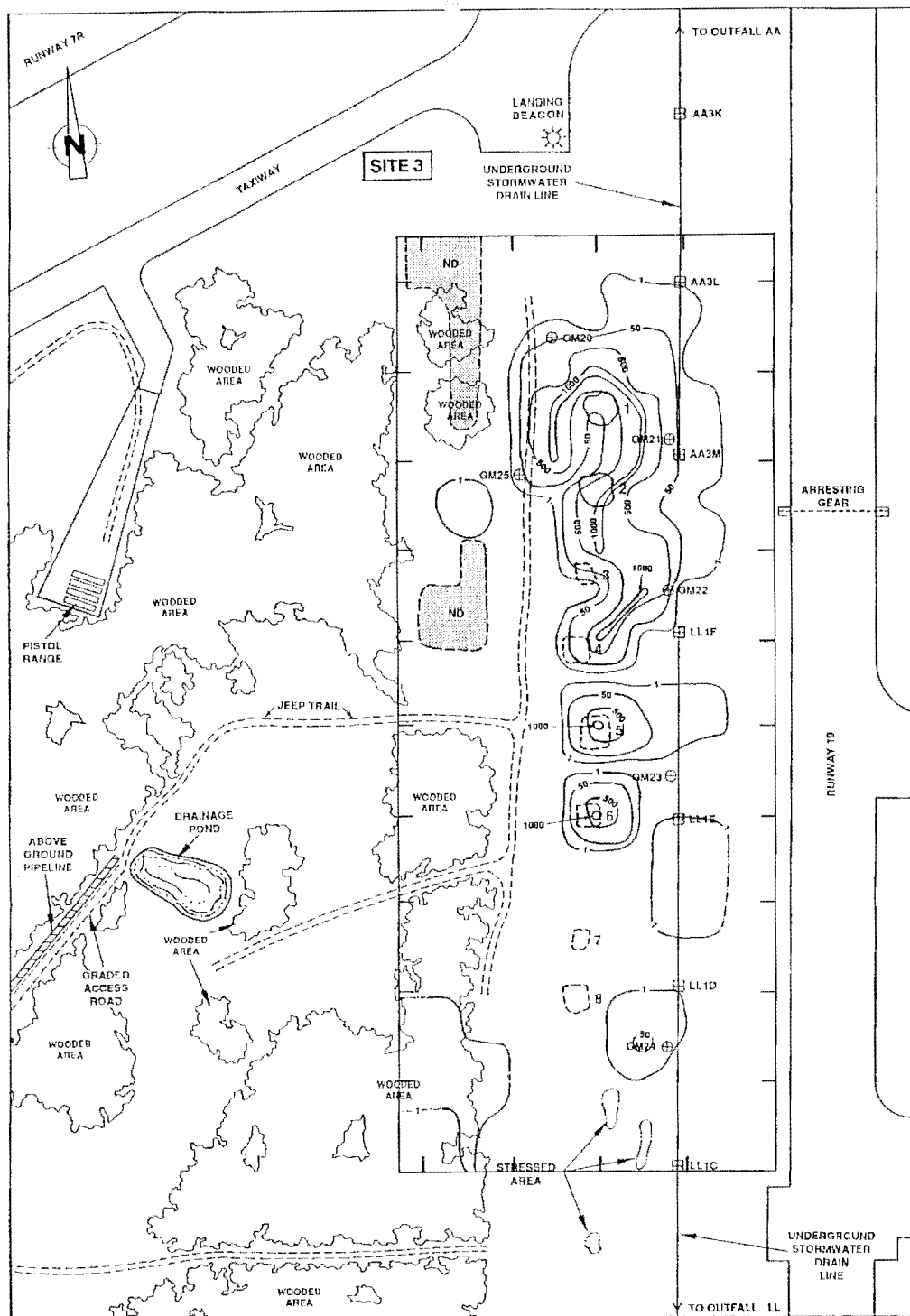
In general, the frequency and magnitude of elevated electromagnetic readings observed on Site 3 were greater in the horizontal [dipole] mode than in the vertical [dipole] mode. This relationship suggests that the burial depth of the material responsible for the observed elevated electromagnetic conductances lies above the effective exploration depth of the EM-31 vertical [dipole] mode survey (19.7 feet) and that the burial depth most likely is between land surface and the effective exploration depth of the EM-31 horizontal [dipole] survey mode (9.8 feet).

### 3.6 SOIL HEADSPACE SURVEY

Figure 3-6 shows the overall distribution of methane-corrected soil headspace readings above background (i.e., >1 ppm) recorded across Site 3. Grid coordinates, sample depth intervals, headspace readings, and a detailed soil headspace map are presented in Appendix E.

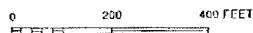
Four areas on Site 3 exhibited methane-corrected soil headspace readings in excess of the applicable Chapter 17-770, Florida Administrative Code (FAC), 50 ppm criterion for excessively petroleum-contaminated soils (see Figure 3-6; Florida Department of Environmental Regulation [FDER] 1990b). The largest area is located in the north-central portion of the site and encompasses burn areas 1 through 4. Smaller, but still extensive areas of >50 ppm methane-corrected soil headspace readings were recorded in the vicinity of burn areas 5 and 6. A very localized area of >50 ppm methane-corrected soil headspace readings was recorded southeast of burn area 8. Neither burn area 7 nor burn area 8 exhibited elevated headspace readings.

Given that waste oils and other non-fuel materials might have been burned at Site 3, the 50 ppm headspace criterion noted above cannot be used as the sole determinant of on-site petroleum contamination of soils. Consequently, Figure 3-6 also shows areas where methane-corrected soil headspace readings above background (i.e., >1 ppm) were recorded. All four >50 ppm areas described above exhibited >1 ppm methane-corrected soil headspace readings around their perimeters. In addition, three isolated areas of >1 ppm methane-corrected soil headspace readings were identified: in the southwest corner of the



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

SCALE



KEY:

- |  |   |
|--|---|
| --- Jeep Trail                               | ⊕ Existing Permanent Shallow Monitoring Well                  |
| ▣ Stormwater Catch Basin with Grate          | GM21 Permanent Monitoring Well Number                         |
| AA3K/LL1C Stormwater Catch Basin Designation | 50 Molhara-Corrected Organic Vapor Isopleth (ppm)             |
| ○ Active Burn Area                           | 50 Inferred Molhara-Corrected Organic Vapor Isopleth (ppm)    |
| ⊖ Former Burn Area                           | ND No Data Available (area under water at time of the survey) |
| 1 Burn Area Number                           |   |

Figure 3-6 SOIL HEADSPACE SURVEY — NAS PENSACOLA SITE 3

site, along the drainage swale southeast of burn area 6, and west of burn area 2 (see Figure 3-6).

The above results clearly indicate the presence of excessively petroleum-contaminated soils in and surrounding burn areas 1 through 6, as well as southeast of burn area 8. Soil contamination may also be present in the areas shown on Figure 3-6 where methane-corrected soil headspace readings above background (i.e., >1 ppm) were recorded.

### **3.7 HYDROLOGIC ASSESSMENT**

#### **3.7.1 Shallow Subsurface Lithology**

Based on information collected during the completion of 22 soil borings and 12 temporary monitoring wells, the shallow subsurface lithology in the vicinity of Site 3 can be characterized as a pale tan to tan, medium- to coarse-grained quartz sand that becomes a pale tan-gray to gray, medium- to coarse-grained quartz sand near the water table. A black, peaty, silty, fine-grained quartz sand was encountered from 1.5 to 2.8 feet BLS during completion of boring B002 at the western site boundary near the northwestern corner of the site. In addition, during completion of boring B007 near the northwestern corner of the site, a reddish-brown, peaty, fine-grained quartz sand was encountered from 1 to 1.5 feet BLS. During the installation of temporary monitoring wells TW024 and TW025 in burn areas 1 and 2, respectively (see Figure 1-2), located in the north-central portion of Site 3, dark gray-black, medium- to coarse-grained, hydrocarbon residue-stained quartz sand was encountered from land surface to 9 feet BLS and land surface to 1.5 feet BLS, respectively. A medium-brown, coarse-grained quartz sand was encountered from 0.7 to 2.5 feet BLS and from 0.2 to 0.8 feet BLS during completion of borings B030 and B032, respectively, along the eastern site boundary in the northeastern quarter of the site. Non-methane organic vapor concentrations measured with an HNu in all the open boreholes ranged from 0 ppm to 199.2 ppm. Lithologic logs for the 22 soil borings and 12 temporary monitoring wells completed on Site 3 are presented in Appendix F. HNu readings taken in the open boreholes are also presented in Appendix F.

### 3.7.2 Water Levels and Groundwater/Surface Water Flow

Tables 3-1 and 3-2 list the surficial zone static water levels and water level elevations for the Site 3 temporary monitoring wells and permanent monitoring wells, respectively. Surface water elevations measured on Site 3 are listed in Table 3-3. The depth to the water table across Site 3 varies from approximately 4 feet BLS in topographically higher areas (i.e., near the center of the northwestern quadrant of the site and along the southeastern-eastern border of the site) to approximately 1 foot BLS in topographically lower portions of the site (i.e., the drainage swale in the vicinity of the northern half of the site). When water level elevation measurements were made on Site 3, the only surface water present on the site was within the drainage swale. Figure 3-7 presents the surficial zone water level elevations measured in the temporary monitoring wells from July 23, 1991, to July 26, 1991, and corresponding groundwater flow directions in the upper portion of the surficial zone of the Sand-and-Gravel Aquifer at Site 3, determined from these elevations. Figure 3-8 presents the surface water elevations measured in the drainage swale on July 30, 1991; the water level elevations measured in the permanent monitoring wells on July 30, 1991; and the corresponding groundwater flow directions in the upper portion of the surficial zone of the Sand-and Gravel Aquifer at Site 3, determined from these elevations.

Figures 3-7 and 3-8 indicate that the direction of surficial zone groundwater flow is generally to the south-southeast across the southern two-thirds of the site and to the east-northeast across the northern one-third of the site. The horizontal hydraulic gradient is about 0.002 in the south-southeast flow direction and between about 0.001 and 0.002 in the east-northeast flow direction. The direction of surficial zone groundwater flow in the general vicinity of Site 3 is probably controlled by groundwater discharge to Pensacola Bay, located approximately 3,000 feet east-southeast of the site; however, the stormwater drainage system present on Site 3 may influence localized surficial zone groundwater flow at the site.

Table 3-3 presents the surface water elevations measured in the Site 3 drainage swale. The direction of surface water flow within the

**Table 3-1**  
**TEMPORARY MONITORING WELL CONSTRUCTION INFORMATION**  
**AND WATER LEVEL ELEVATIONS**  
**NAS PENSACOLA SITE 3**

Well Number	Total Depth (BLS)	Depth to Water (BLS)	Depth to Water BTOC	TOC Elevation	Water Level Elevation	Date Measured
TW023	7.40	3.43	5.99	30.56	24.57	7/25/91
TW024	6.87	2.36	5.42	30.17	24.75	7/26/91
TW025	6.81	2.16	5.30	30.10	24.80	7/26/91
TW026	7.05	3.27	6.12	30.69	24.57	7/24/91
TW027	8.38	2.83	5.30	29.64	24.34	7/24/91
TW028	7.91	3.77	5.75	29.47	23.72	7/23/91
TW029	8.30	3.58	5.14	27.83	22.69	7/23/91
TW030	8.14	3.43	5.15	29.42	24.27	7/25/91
TW031	7.45	3.09	5.47	29.98	24.51	7/25/91
TW032	8.22	2.97	5.32	29.71	24.39	7/25/91
TW033	7.52	2.98	5.22	29.38	24.16	7/25/91
TW034	8.24	4.20	5.80	28.75	22.95	7/23/91

14[NASP]UH8039:T0361/618/22

**Notes:**

All depths are in feet; all elevations are in feet referenced to mean sea level (MSL); and all wells were constructed of 2-inch diameter stainless steel with 5 feet of 0.01-inch screen.

**Key:**

BLS = Below land surface.  
 TOC = Top of casing.  
 BTOC = Below top of casing.

Source: Ecology and Environment, Inc., 1991.

**Table 3-2**  
**PERMANENT MONITORING WELL CONSTRUCTION INFORMATION**  
**AND WATER LEVEL ELEVATIONS**  
**NAS PENSACOLA SITE 3**

Well Number	Total Depth (BLS)	Depth to Water (BLS)**	Depth to Water BTOC	TOC Elevation	Water Level Elevation	Date Measured
GM20*	--	--	--	--	--	--
GM21	12.76	1.14	2.24	26.30	24.06	07/30/91
GM22*	--	--	--	--	--	--
GM23	12.84	1.28	2.19	26.11	23.92	07/30/91
GM24	12.745	1.49	2.10	24.91	22.81	07/30/91
GM25	12.74	4.21	5.26	30.15	24.89	07/30/91

14[NASP]UH8039:T0361/816/22

Notes:

All depths are in feet; all elevations are in feet referenced to mean sea level (MSL); and all wells were constructed of 2-inch diameter PVC with 2.5 feet of 0.01-inch screen.

Key:

\*Well destroyed; could not be measured.

\*\*Calculations based on land surface elevations from G & M 1984.

BLS = Below land surface.

TOC = Top of casing.

BTOC = Below top of casing.

Source: Geraghty and Miller, 1984; Ecology and Environment, Inc., 1991.

Table 3-3

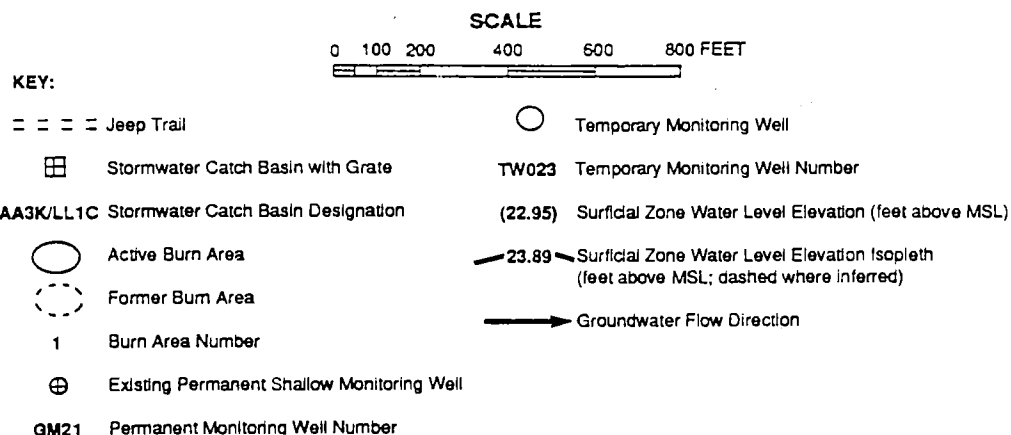
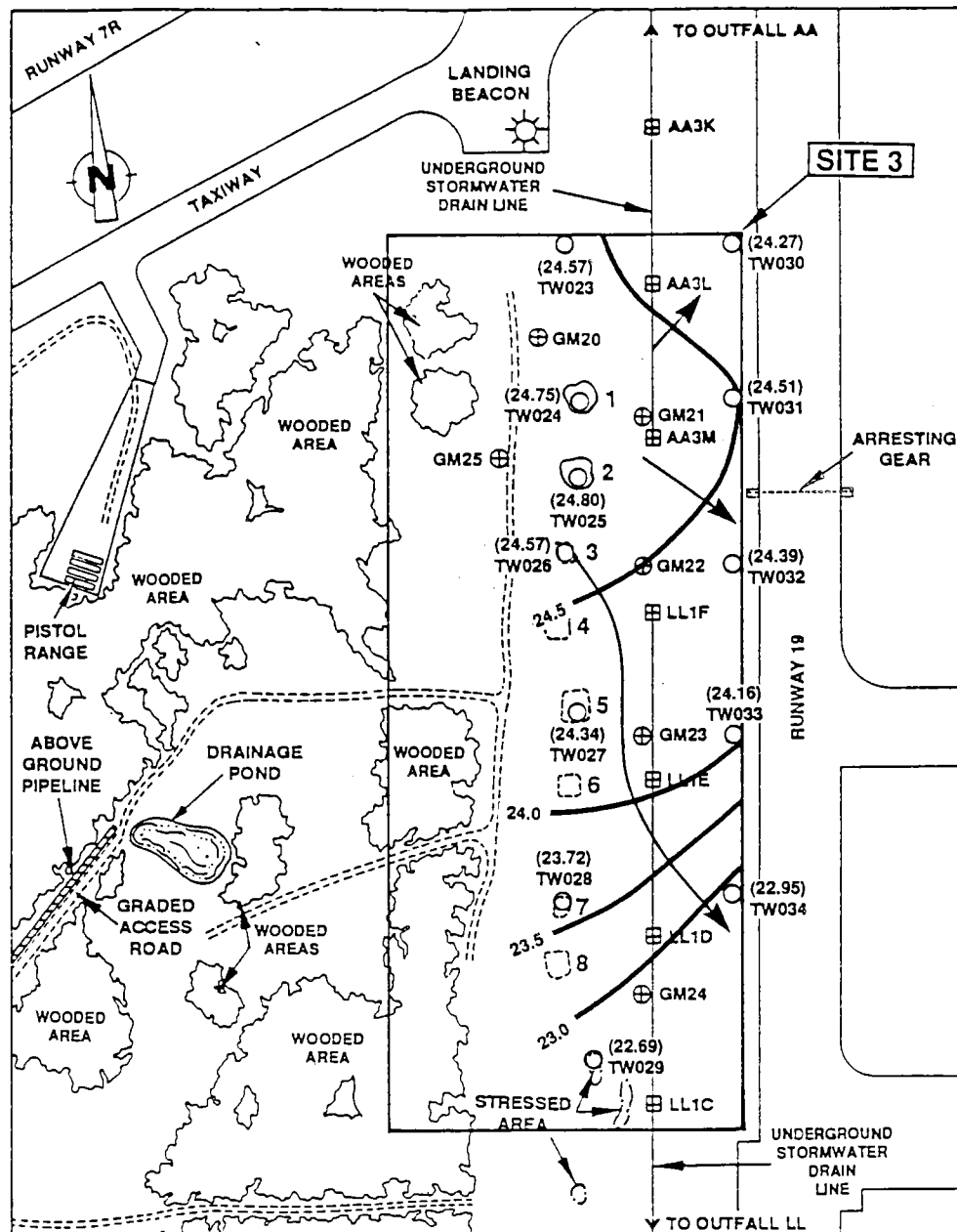
**SURFACE WATER ELEVATIONS  
NAS PENSACOLA SITE 3**

Location	Water Level Elevation	Date Measured
SW01 (N16+40/W2+25)	23.95	07/30/91
SW02 (N11+50/W2+00)	24.03	07/30/91
SW03 (N12+50/W2+00)	23.89	07/30/91
SW04 (N9+00/W2+00)	23.89	07/30/91

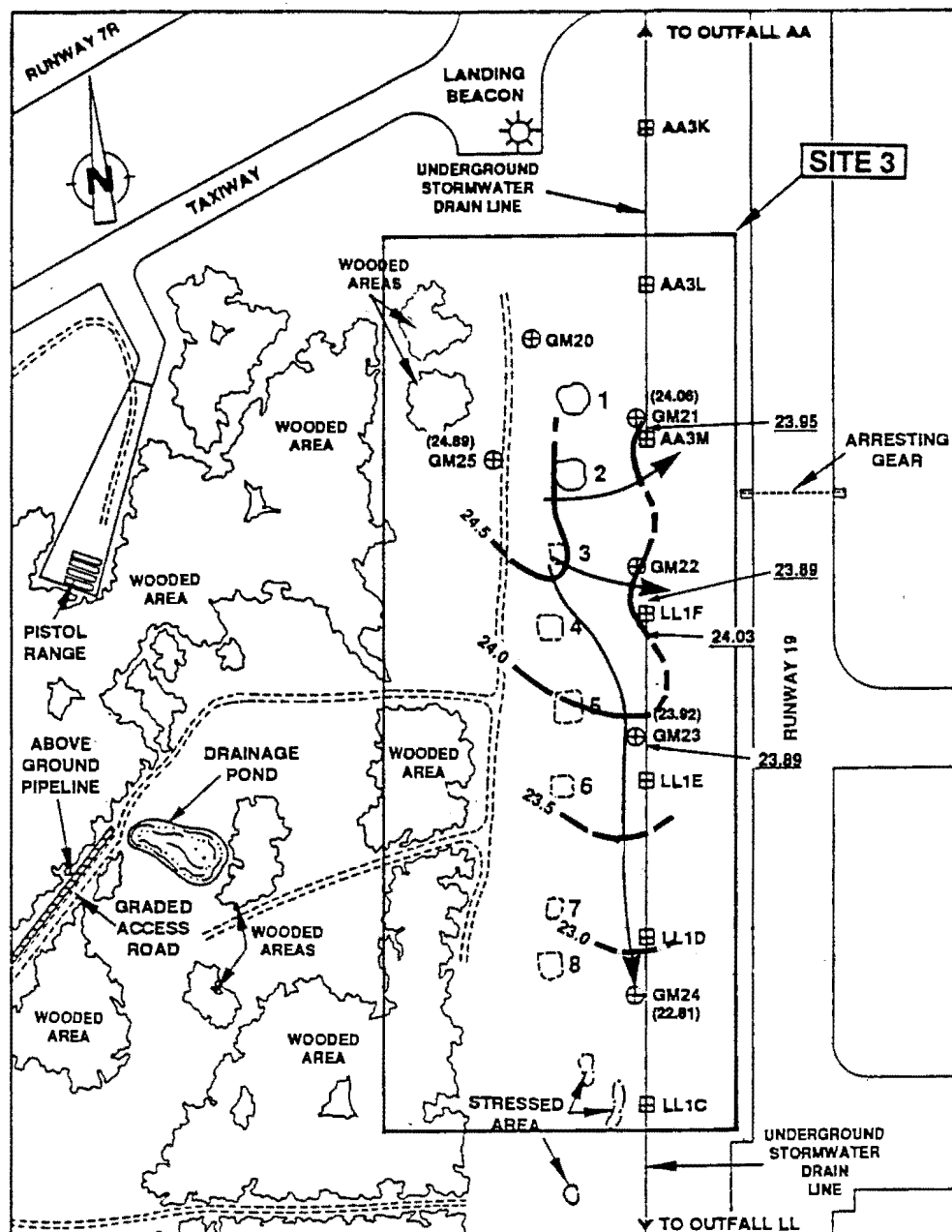
14[NASP]UH8039:T0361/818/31

Source: Ecology and Environment, Inc., 1991.

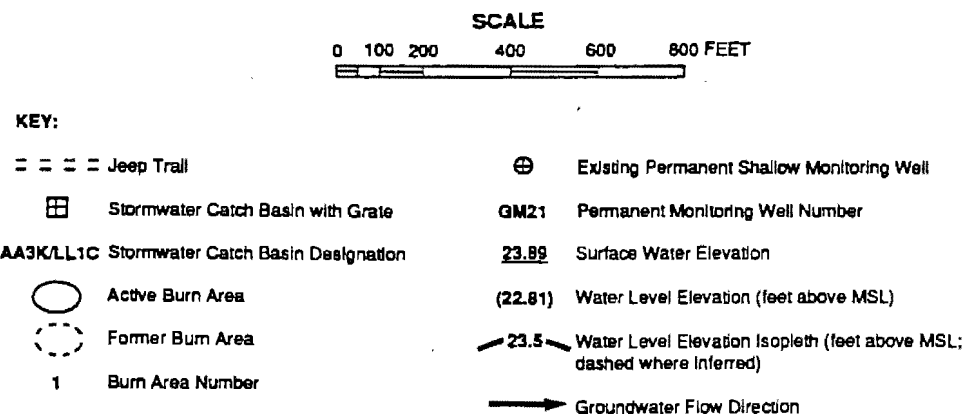




**Figure 3-7 SURFICIAL ZONE WATER LEVEL ELEVATIONS FOR TEMPORARY MONITORING WELLS — NAS PENSACOLA SITE 3**



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991



**Figure 3-8 SURFACE WATER ELEVATIONS AND SURFICIAL ZONE WATER LEVEL ELEVATIONS FOR PERMANENT MONITORING WELLS (MEASURED 7/30/91) — NAS PENSACOLA SITE 3**

drainage swale appears to be generally to the south; however, localized flow within the swale is toward the nearest stormwater catch basin.

### 3.8 CHEMICAL ANALYSES

The following section presents the results of the laboratory analyses of the surface water, sediment, soil, and groundwater samples collected at Site 3. The specific analytical parameters and parameter groups are listed or referenced in Table 2-2.

#### 3.8.1 Surface Water

Table 3-4 summarizes the analytical screening results for the surface water samples collected during the Phase I investigation of Site 3. Samples SW001 and SW003 were collected from on-site stormwater catch basins LL1F and AA3M, respectively (see Figure 2-1). Samples SW002 and SW004 were collected from off-site stormwater drainage system outfalls LL and AA, respectively (see Figure 2-3). The complete analytical results for the Site 3 surface water samples are presented in Appendix G.

In general, one or more of the Site 3 surface water samples exhibited low to moderately elevated concentrations of metals, total recoverable petroleum hydrocarbons (TRPHs), volatile organic compounds (VOCs), and/or phenols. Polynuclear aromatic hydrocarbons (PAHs), pesticides, and polychlorinated biphenyls (PCBs) were not detected in any of the surface water samples.

#### Metals

Chromium and zinc were the only metals detected in the Site 3 surface water samples (see Table 3-4). However, zinc at similar levels was also detected in the associated laboratory method blank; therefore, the presence of zinc in the surface water samples can be attributed to laboratory-derived contamination.

Chromium was detected in only two samples: on-site catch basin LL1F sample SW001 (67 micrograms per liter [ $\mu\text{g/L}$ ]) and off-site outfall LL duplicate sample SW002D (10  $\mu\text{g/L}$ ; see Table 3-4 and Figure 3-9). The detected chromium concentration in sample SW001 exceeds the FDER Class III Surface Water Quality Standard/Fresh Water of 50  $\mu\text{g/L}$  (FDER 1990c).

**Table 3-4**  
**SUMMARY ANALYTICAL SCREENING RESULTS FOR SURFACE WATER SAMPLES**  
**NAS PENSACOLA SITE 3**  
 (All results in  $\mu\text{g/L}$ , unless noted)

Parameter	Detection Limit	Sample Number (Location)					FSWS
		P03SW001 (SW001)	P03SW002 (SW002)	P03SW002D <sup>a</sup> (SW002)	P03SW003 (SW003)	P03SW004 (SW004)	
Chromium	10	67	--	10	--	--	50
Zinc	20	48(B)	26(B)	64(B)	--	50(B)	30
TRPHs (mg/L)	1.0	--	--	--	3.0	--	
Benzene	10	--	--	--	56	--	
Toluene	10	21	--	--	--	--	
Ethylbenzene	10	10	--	--	--	--	
Total Xylenes	10	150	--	--	87	--	
Phenols as Trichlorophenol	100	--	--	230	140	--	1.0

14[NASP]UH8039:T0361/669/19

## Key:

<sup>a</sup>Duplicate of sample P03SW002.

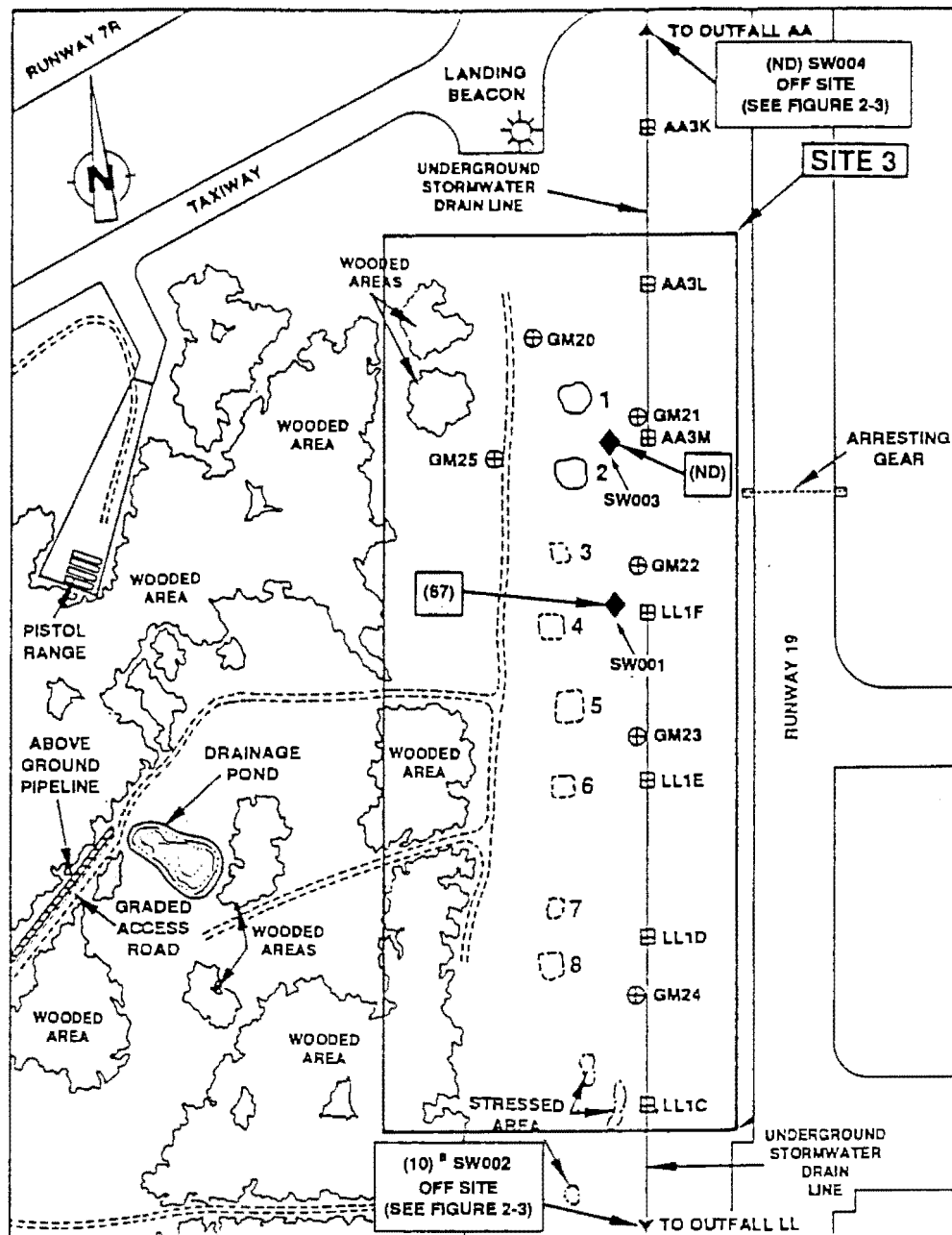
FSWS = Florida Class III Surface Water Quality Standard/Fresh Water.

Dash (--) indicates compound not detected.

## Qualifier:

(B) = Compound also present in method blank.

Source: Ecology and Environment, Inc., 1991.



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

**Figure 3-9 CHROMIUM CONCENTRATIONS DETECTED IN ON-SITE AND OFF-SITE SURFACE WATER SAMPLES — NAS PENSACOLA SITE 3**

### **TRPHs**

A low TRPH concentration of 3.0 milligrams per liter (mg/L) was detected only in on-site catch basin AA3M surface water sample SW003 (see Table 3-4 and Figure 3-10). No FDER Class III Surface Water Quality Standard/Fresh Water exists for this analyte (FDER 1990c).

### **VOCs**

VOCs were detected only in on-site catch basin surface water samples SW001 and SW003 (see Table 3-4 and Figure 3-11). Xylenes were detected in both samples (150 and 87 µg/L, respectively). Toluene (21 µg/L) and ethylbenzene (10 µg/L) were detected only in sample SW001, and benzene (56 µg/L) was detected only in sample SW003. No FDER Class III Surface Water Quality Standards/Fresh Water exist for these compounds (FDER 1990c.)

### **Phenols**

Phenols were detected in only two surface water samples: on-site catch basin AA3M sample SW003 (140 µg/L) and off-site outfall LL duplicate sample SW002D (230 µg/L; see Table 3-4 and Figure 3-10). The detected phenol concentrations exceed the FDER Class III Surface Water Quality Standard/Fresh Water of 1.0 µg/L for both phenolic compounds and phenol (FDER 1990c). It should be noted that phenols were reported as trichlorophenol for laboratory reporting purposes; however, phenols other than trichlorophenol may be present in the samples.

### **3.8.2 Sediment**

Table 3-5 summarizes the analytical screening results for the sediment samples collected during the Phase I investigation of Site 3. Samples SD001 and SD003 were collected from on-site stormwater catch basins LL1F and AA3M, respectively (see Figure 2-1). Samples SD002 and SD004 were collected from off-site stormwater drainage system outfalls LL and AA, respectively (see Figure 2-3). Appendix H presents the complete analytical screening results for sediment samples.

In general, one or more of the Site 3 sediment samples exhibited low to highly elevated concentrations of metals, TRPHs, VOCs (xylenes),



0 100 200 400 600 800 FEET

== == Jeep Trail

**AA3K/LL1C Stormwater Catch Basin Designation**

 Former Burn Area

⊕ Existing Permanent Shallow Monitoring Well

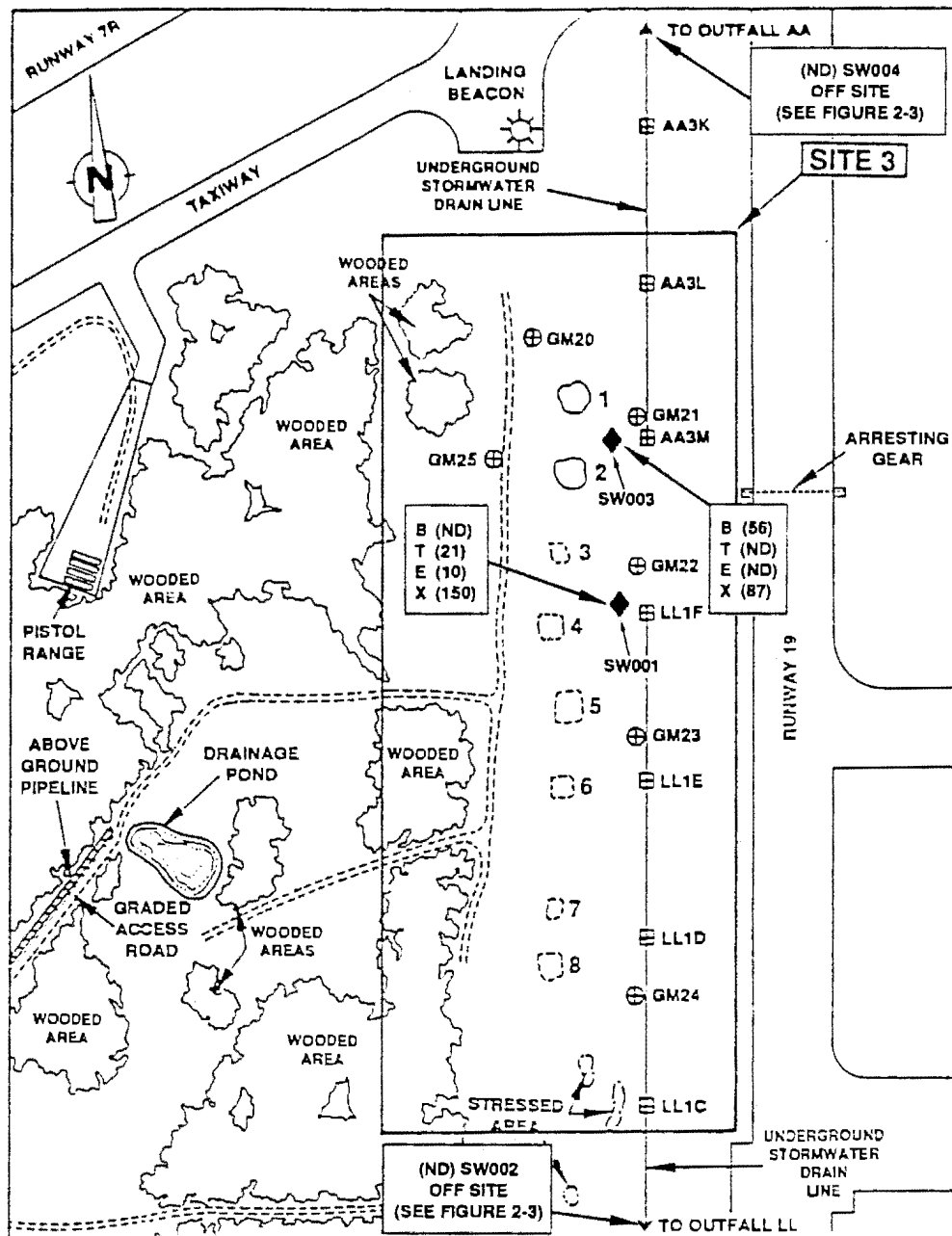
 Surface Water and Sediment Sample Location

Phenol Concentration (ug/L)

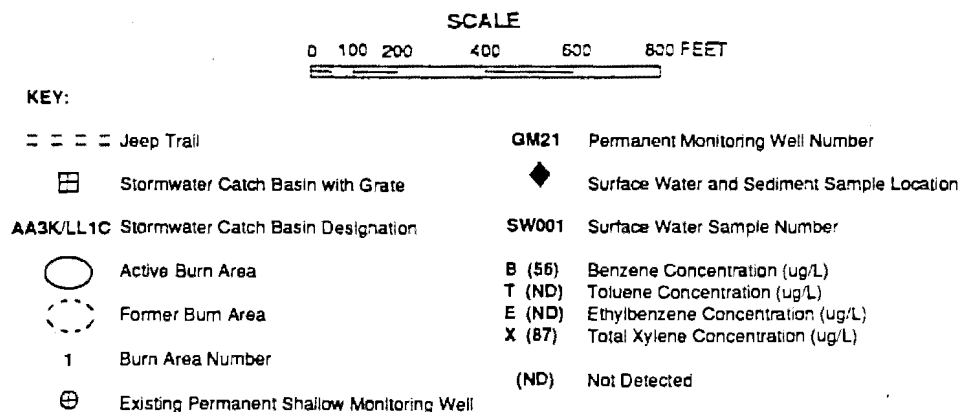
(ND) Not Detected

**a** Concentration from Duplicate Sample SW002D

3-36



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991



**Figure 3-11 BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENE CONCENTRATIONS DETECTED IN ON-SITE AND OFF-SITE SURFACE WATER SAMPLES — NAS PENSACOLA SITE 3**



**Table 3-5**  
**SUMMARY ANALYTICAL SCREENING RESULTS FOR SEDIMENT SAMPLES**  
**NAS PENSACOLA SITE 3**  
**(All results in mg/kg, unless noted)**

Parameter	Detection Limit	Sample Number (Location)				
		P03SD001 (SD001)	P03SD002 (SD002)	P03SD002D <sup>a</sup> (SD002)	P03SD003 (SD003)	P03SD004 (SD004)
Chromium	1.0	1.8	--	--	7.0	1.3
Zinc	2.0	4.0	18	14	32	9.5
Lead	4.0	13	--	10	180	--
Cadmium	0.50	--	--	--	1.4	--
Copper	2.5	--	--	--	31	--
TRPHs	5.0	11	--	--	770	9.7
Total Xylenes (µg/kg)	1,000	1,600	--	--	1,200	--
Total PAHs as Benzo-a-pyrene (µg/kg)	1,000	1,700	--	--	(L)	(L)
Phenols as Trichlorophenol (µg/kg)	2,000	--	5,300	3,700	21,000	--

14[NASP]UH8039:T0361/670/19

**Key:**<sup>a</sup> Duplicate of sample P03SD002.

Dash (--) indicates compound not detected.

**Qualifier:**

(L) = Present below stated detection limit.

Source: Ecology and Environment, Inc., 1991.

PAHs, and/or phenols. Pesticides and PCBs were not detected in any of the sediment samples.

#### **Metals**

Sediment samples SD001, SD002, duplicate SD002, and SD004 exhibited low ( $\leq 24$  milligrams per kilogram [mg/kg]) total metals concentrations (see Table 3-5). In contrast, on-site sample SD003 (catch basin AA3M) not only exhibited a much higher total metals concentration (251.4 mg/kg), but also exhibited the highest detected concentrations of chromium, zinc, and lead (7.0 mg/kg, 32 mg/kg, and 180 mg/kg, respectively), as well as the only detectable levels of cadmium and copper (1.4 mg/kg and 31 mg/kg, respectively). Figure 3-12 shows the distribution of chromium, zinc, and lead concentrations detected in the Site 3 on-site and off-site sediment samples.

#### **TRPHs**

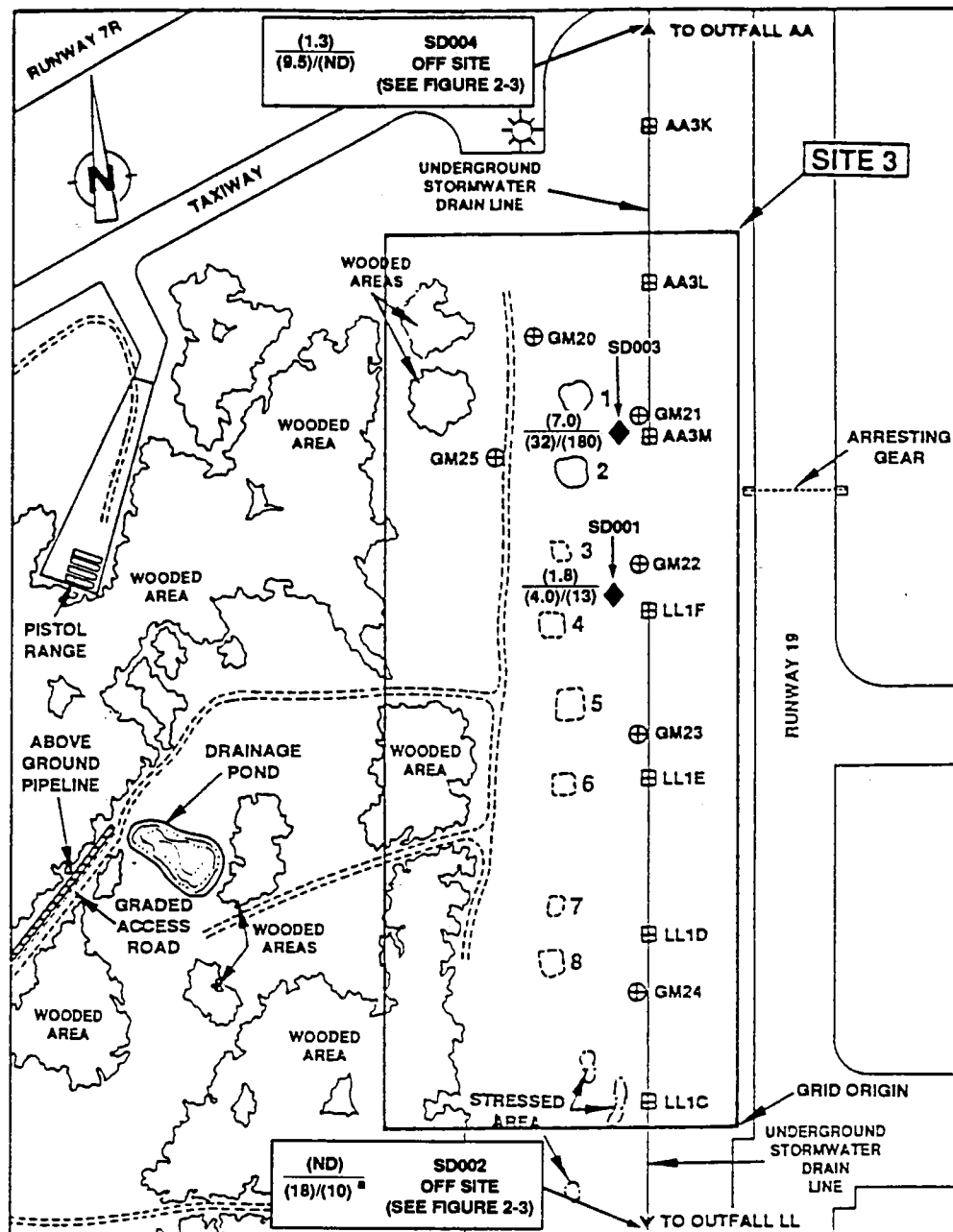
TRPHs were detected in both on-site catch basin sediment samples SD001 and SD003, as well as in off-site outfall AA sample SD004 (see Table 3-5 and Figure 3-13). The highest concentration was detected in on-site catch basin AA3M sample SD003 (770 mg/kg), in contrast to the concentrations detected in samples SD001 (11 mg/kg) and SD004 (9.7 mg/kg).

#### **VOCs**

Xylenes were the only VOCs detected. Xylenes were detected only in on-site catch basin sediment samples SD001 and SD003 at similar concentrations of 1,600 micrograms per kilogram ( $\mu\text{g/kg}$ ) and 1,200  $\mu\text{g/kg}$ , respectively (see Table 3-5 and Figure 3-13).

#### **PAHs**

PAHs were detected in both on-site catch basin sediment samples SD001 (1,700  $\mu\text{g/kg}$ ) and SD003 ( $< 1,000$   $\mu\text{g/kg}$ ), as well as in off-site outfall AA sample SD004 ( $< 1,000$   $\mu\text{g/kg}$ ; see Table 3-5 and Figure 3-13). It should be noted that PAHs were reported as benzo-a-pyrene for laboratory reporting purposes; however, PAHs other than benzo-a-pyrene may be present in the samples.



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

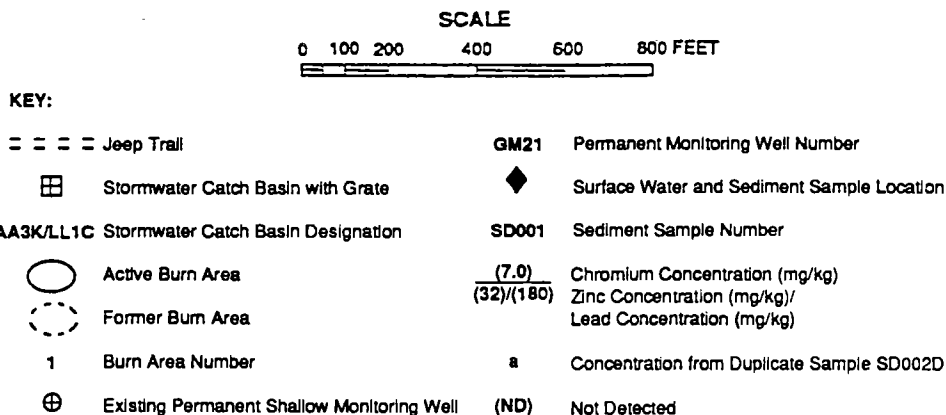
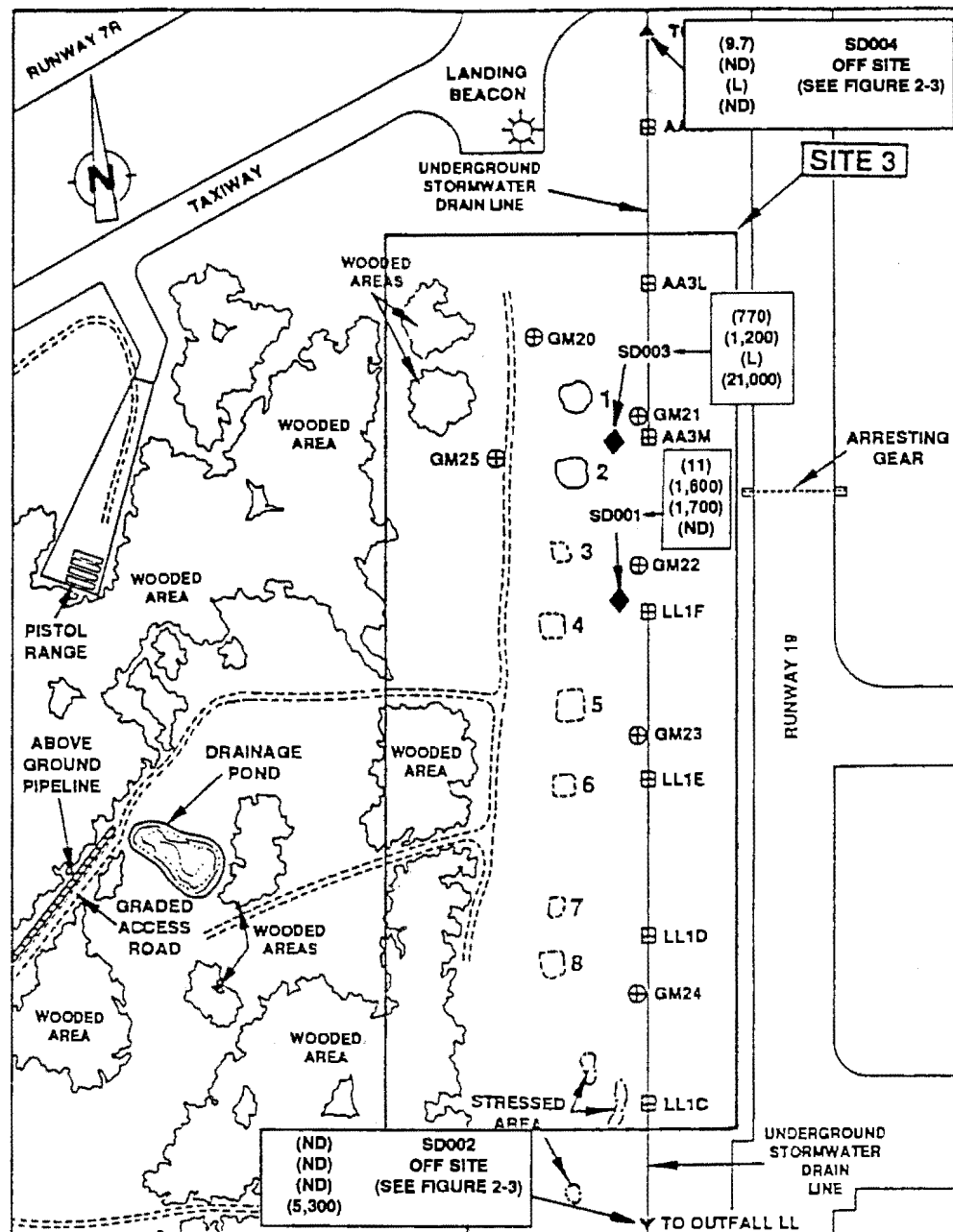


Figure 3-12 CHROMIUM, ZINC, AND LEAD CONCENTRATIONS DETECTED IN ON-SITE AND OFF-SITE SEDIMENT SAMPLES — NAS PENSACOLA SITE 3



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

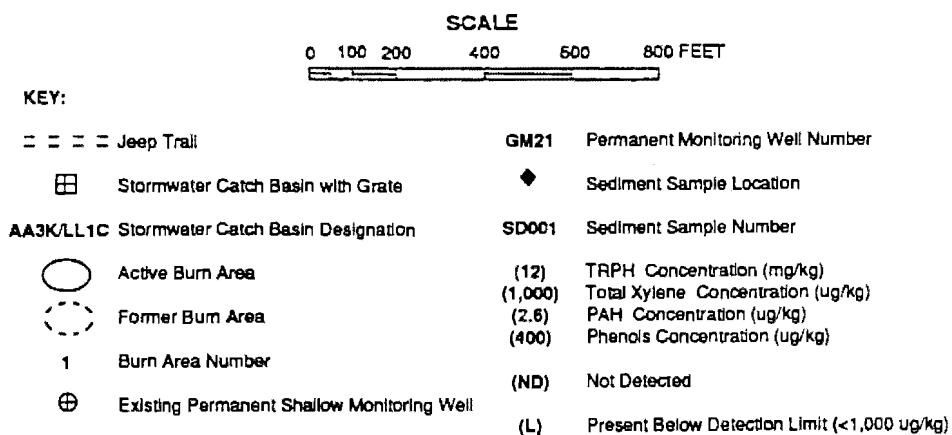


Figure 3-13 TRPH, TOTAL XYLENE, PAH, AND PHENOL CONCENTRATIONS DETECTED IN ON-SITE AND OFF-SITE SEDIMENT SAMPLES — NAS PENSACOLA SITE 3

## Phenols

Phenols were detected in only two of the Site 3 sediment samples: on-site catch basin AA3M sample SD003 (21,000 µg/kg) and off-site outfall LL sample SD002 and duplicate SD002D (5,300 and 3,700 µg/kg, respectively; see Table 3-5 and Figure 3-13). It should be noted that phenols were reported as trichlorophenol for laboratory reporting purposes; however, phenols other than trichlorophenol may be present in the samples.

### 3.8.3 Soil

Table 3-6 summarizes the analytical screening results for soil samples collected on Site 3 and presents the Resource Conservation and Recovery Act (RCRA) Proposed Corrective Action Levels (PCALs) for soil, where applicable (EPA 1990). Figure 2-1 shows the soil boring locations on Site 3. The complete analytical screening results for Site 3 soil samples are presented in Appendix I.

In general, elevated concentrations of metals, TRPHs, VOCs, PAHs, and/or phenols were detected in one or more of the soil samples. Pesticides and PCBs were not detected in any of the soil samples.

## Metals

Figure 3-14 shows the distribution of total (analytical screening group) metals concentrations detected in the Site 3 soil samples. Figure 3-15 shows the distribution of chromium, lead, and cadmium concentrations in the Site 3 soil samples.

Most of the Site 3 soil samples exhibited very low metal concentrations. In samples collected from 23 of the 34 soil borings, metals were either not detected (13 borings) or total concentrations were less than 5 mg/kg (10 borings). Only five samples exhibited total metal concentrations greater than 20 mg/kg:

S018A	108.12 mg/kg	Edge of drainage swale, east of burn area 1;
S013AD	56.0 mg/kg	Burn area 4, duplicate sample;
S025A	43.77 mg/kg	Burn area 2;
S014A	36.86 mg/kg	Burn area 6; and
S024A	23.5 mg/kg	Burn area 1.

Table 3-6

**SUMMARY ANALYTICAL SCREENING RESULTS FOR SOIL SAMPLES  
NAS PENSACOLA SITE 3  
(All results in  $\mu\text{g/kg}$ , unless noted)**

Parameter	Detection Limit	Sample Number (Location and Depth Interval)						PCAL <sup>a</sup>
		P03S001A (B001A)	P03S002A (B002A)	P03S003A (B003A)	P03S004A (B004A)	P03S005A (B005A)	P03S006A (B006A)	
Chromium (mg/kg)	1.0	--	1.3	1.4	1.2	1.0	--	$4 \times 10^2$
Zinc (mg/kg)	2.0	--	--	--	2.5	--	--	$1.6 \times 10^4$
Lead (mg/kg)	4.0	--	--	--	--	--	--	
Cadmium (mg/kg)	0.50	--	--	--	--	--	--	$4 \times 10^1$
Copper (mg/kg)	2.5	--	--	--	--	--	--	$2.5 \times 10^3$
TRPHs (mg/kg)	5.0	23	15	15	--	23	--	
Toluene	1,000	--	--	--	--	--	--	$2 \times 10^7$
Ethylbenzene	1,000	--	--	--	--	--	--	$8 \times 10^6$
Total Xylenes	1,000	--	--	--	--	--	--	$2 \times 10^8$
Methylene Chloride	1,000	--	--	1,000	--	--	--	$9 \times 10^4$
Total PAHs as Benzo-a-pyrene	1,000	--	--	--	--	--	--	
Phenols as Trichlorophenol	2,000	--	--	--	--	--	--	

14[NASP]UH8039:T0361/643/5

Key at end of table.

Table 3-6 (Cont.)

Parameter	Detection Limit	Sample Number (Location and Depth Interval)						PCAL <sup>a</sup>
		P03S007A (B007A)	P03S008A (B008A)	P03S009A (B009A)	P03S010A (B010A)	P03S011A (B011A)	P03S012A (B012A)	
Chromium (mg/kg)	1.0	2.1	--	2.0	--	--	--	$4 \times 10^2$
Zinc (mg/kg)	2.0	--	--	--	2.9	3.1	--	$1.6 \times 10^4$
Lead (mg/kg)	4.0	6.1	--	--	--	--	--	--
Cadmium (mg/kg)	0.50	0.53	--	--	--	--	--	$4 \times 10^1$
Copper (mg/kg)	2.5	--	--	--	--	--	--	$2.5 \times 10^3$
TRPHs (mg/kg)	5.0	14	--	--	--	--	20	--
Toluene	1,000	--	--	--	--	--	--	$2 \times 10^7$
Ethylbenzene	1,000	--	--	--	--	--	--	$8 \times 10^6$
Total Xylenes	1,000	--	--	--	--	--	--	$2 \times 10^8$
Methylene Chloride	1,000	--	--	--	--	--	--	$9 \times 10^4$
Total PAHs as Benzo-a-pyrene	1,000	--	--	--	--	--	--	--
Phenols as Trichlorophenol	2,000	--	--	--	--	--	--	--

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Key at end of table.

Table 3-6 (Cont.)

Parameter	Detection Limit	Sample Number (Location and Depth Interval)						PCAL <sup>a</sup>
		P03S013A (B013A)	P03S013AD <sup>b</sup> (B013A)	P03S014A (B014A)	P03S015A (B015A)	P03S016A (B016A)	P03S017A (B017A)	
Chromium (mg/kg)	1.0	1.1	--	--	--	--	1.8	4x10 <sup>2</sup>
Zinc (mg/kg)	2.0	5.7	9.0	9.2	3.0	--	--	1.6x10 <sup>4</sup>
Lead (mg/kg)	4.0	13	22	27	9.4	--	10	--
Cadmium (mg/kg)	0.50	0.57	--	0.66	--	--	--	4x10 <sup>1</sup>
Copper (mg/kg)	2.5	9.7	25	--	--	--	--	2.5x10 <sup>3</sup>
TRPHs (mg/kg)	5.0	19,000	16,000	13,000	480	--	230	--
Toluene	1,000	30,000	(L) <sup>d</sup>	-- <sup>e</sup>	--	--	--	2x10 <sup>7</sup>
Ethylbenzene	1,000	24,000 <sup>d</sup>	(L) <sup>d</sup>	7,100 <sup>e</sup>	--	--	--	8x10 <sup>6</sup>
Total Xylenes	1,000	200,000 <sup>d</sup>	150,000 <sup>d</sup>	43,000 <sup>e</sup>	--	--	--	2x10 <sup>8</sup>
Methylene Chloride	1,000	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>e</sup>	--	--	--	9x10 <sup>4</sup>
Total PAHs as Benzo-a-pyrene	1,000	11,000	10,000	2,800	--	--	--	--
Phenols as Trichlorophenol	2,000	360,000	230,000	300,000	--	--	12,000	--

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Key at end of table.



Table 3-6 (Cont.)

Parameter	Detection Limit	Sample Number (Location and Depth Interval)						PCAL <sup>a</sup>
		P03S018A (B018A)	P03S019A (B019A)	P03S020A (B020A)	P03S021A (B021A)	P03S022A (B022A)	P03S023A (B023A)	
Chromium (mg/kg)	1.0	2.3	1.0	1.6	1.3	--	--	4x10 <sup>2</sup>
Zinc (mg/kg)	2.0	13	--	--	--	6.2	--	1.6x10 <sup>4</sup>
Lead (mg/kg)	4.0	71	--	--	15	--	--	
Cadmium (mg/kg)	0.50	0.82	--	--	--	--	--	4x10 <sup>1</sup>
Copper (mg/kg)	2.5	21	--	--	--	--	--	2.5x10 <sup>3</sup>
TRPHs (mg/kg)	5.0	2,000	15	17	--	--	19	
Toluene	1,000	--	--	--	--	--	--	2x10 <sup>7</sup>
Ethylbenzene	1,000	--	--	--	--	--	--	8x10 <sup>6</sup>
Total Xylenes	1,000	--	--	--	--	--	--	2x10 <sup>8</sup>
Methylene Chloride	1,000	--	--	--	--	--	--	9x10 <sup>4</sup>
Total PAHs as Benzo-a-pyrene	1,000	--	--	--	--	--	--	
Phenols as Trichlorophenol	2,000	30,000	--	--	--	--	--	

14[NASP]UH8039:T0361/643/5

Key at end of table.

Table 3-6 (Cont.)

Parameter	Detection Limit	Sample Number (Location and Depth Interval)						PCAL <sup>a</sup>
		P03S024A (B024A)	P03S025A (B025A)	P03S025AD <sup>c</sup> (B025A)	P03S026A (B026A)	P03S027A (B027A)	P03S028A (B028A)	
Chromium (mg/kg)	1.0	1.5	--	--	--	1.0	--	4x10 <sup>2</sup>
Zinc (mg/kg)	2.0	--	7.0	6.7	2.0	--	--	1.6x10 <sup>4</sup>
Lead (mg/kg)	4.0	22	23	15	--	14	--	
Cadmium (mg/kg)	0.50	--	0.77	0.74	--	--	--	4x10 <sup>1</sup>
Copper (mg/kg)	2.5	--	13	8.5	--	--	--	2.5x10 <sup>3</sup>
TRPHs (mg/kg)	5.0	3,700	13,000	12,000	950	1,700	--	
Toluene	1,000	-- <sup>e</sup>	39,000 <sup>f</sup>	39,000 <sup>f</sup>	--	-- <sup>g</sup>	--	2x10 <sup>7</sup>
Ethylbenzene	1,000	-- <sup>e</sup>	16,000 <sup>f</sup>	18,000 <sup>f</sup>	--	-- <sup>g</sup>	--	8x10 <sup>6</sup>
Total Xylenes	1,000	10,000 <sup>e</sup>	110,000 <sup>f</sup>	130,000 <sup>f</sup>	--	2,500 <sup>g</sup>	--	2x10 <sup>8</sup>
Methylene Chloride	1,000	-- <sup>e</sup>	-- <sup>f</sup>	-- <sup>f</sup>	--	-- <sup>g</sup>	--	9x10 <sup>4</sup>
Total PAHs as Benzo-a-pyrene	1,000	3,200	8,600	9,000	--	1,300	--	
Phenols as Trichlorophenol	2,000	130,000	380,000	360,000	13,000	61,000	--	

14{NASP}UH8039:T0361/643/5

Key at end of table.

Table 3-6 (Cont.)

Parameter	Detection Limit	Sample Number (Location and Depth Interval)						PCAL <sup>a</sup>
		P03S029A (B029A)	P03S030A (B030A)	P03S031A (B031A)	P03S032A (B032A)	P03S033A (B033A)	P03S034A (B034A)	
Chromium (mg/kg)	1.0	--	--	--	--	--	--	$4 \times 10^2$
Zinc (mg/kg)	2.0	--	--	--	--	--	--	$1.6 \times 10^4$
Lead (mg/kg)	4.0	--	--	--	--	--	--	
Cadmium (mg/kg)	0.50	--	--	--	--	--	--	$4 \times 10^1$
Copper (mg/kg)	2.5	--	--	--	--	--	--	$2.5 \times 10^3$
TRPHs (mg/kg)	5.0	7.6	21	13	6.1	11	11	
Toluene	1,000	--	--	--	--	--	--	$2 \times 10^7$
Ethylbenzene	1,000	--	--	--	--	--	--	$8 \times 10^6$
Total Xylenes	1,000	--	--	--	--	--	--	$2 \times 10^8$
Methylene Chloride	1,000	--	--	--	--	--	--	$9 \times 10^4$
Total PAHs as Benzo-a-pyrene	1,000	--	--	--	--	--	--	
Phenols as Trichlorophenol	2,000	--	3,900	--	--	--	--	

14[NASP]UH8039:T0361/643/5

## Key:

PCAL = RCRA Proposed Corrective Action Level.  
Dash (--) indicates compound not detected.

<sup>a</sup>PCAL listed for chromium is for chromium (VI).

<sup>b</sup>Duplicate of sample P03S013A.

<sup>c</sup>Duplicate of sample P03S025A.

<sup>d</sup>Detection limit for specified parameter increased by a factor of 20 in this sample.

<sup>e</sup>Detection limit for specified parameter increased by a factor of 5 in this sample.

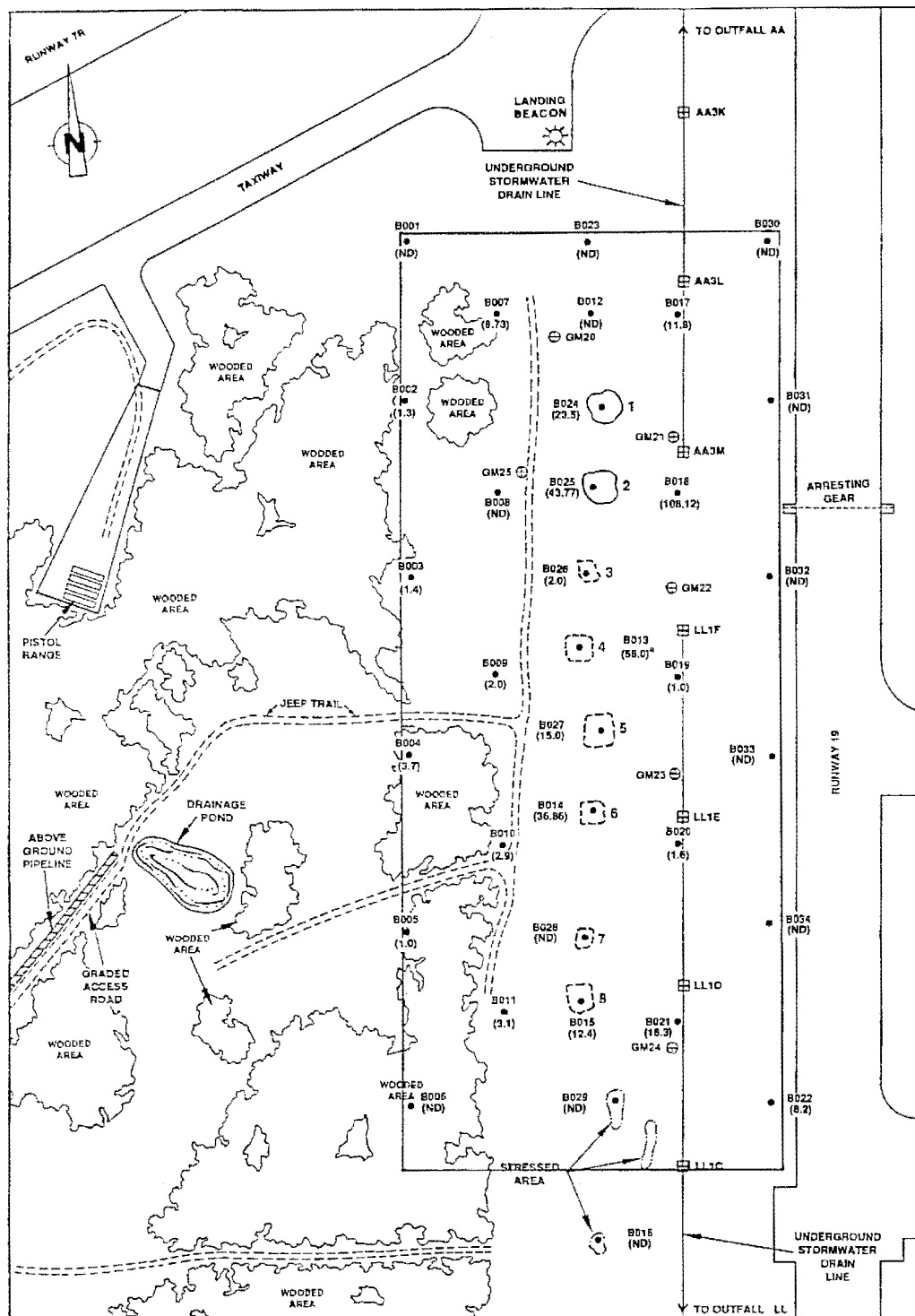
<sup>f</sup>Detection limit for specified parameter increased by a factor of 10 in this sample.

<sup>g</sup>Detection limit for specified parameter increased by a factor of 2 in this sample.

## Qualifier:

(L) = Present below stated detection limit.

Source: Ecology and Environment, Inc., 1991.



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

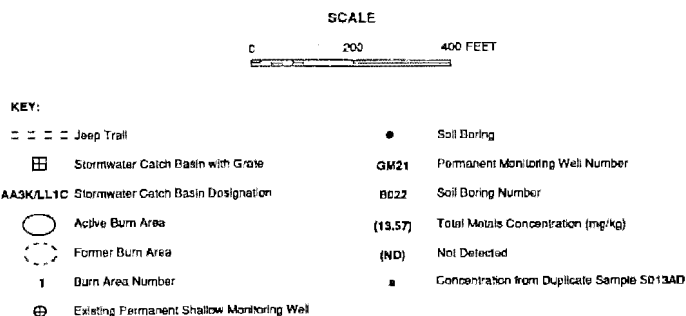
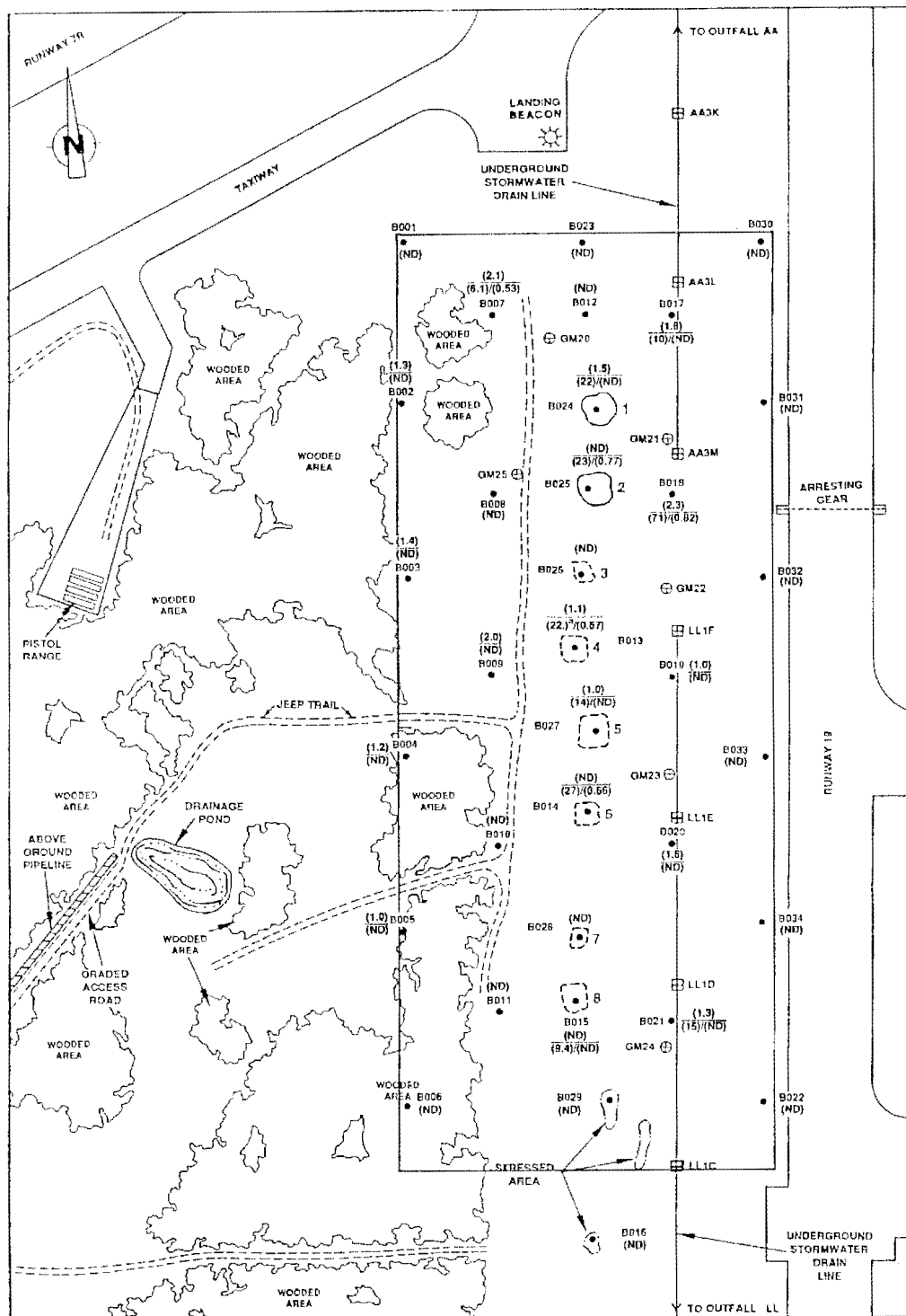


Figure 3-14 TOTAL METALS CONCENTRATIONS (SCREENING GROUP METALS ONLY) DETECTED IN SOIL SAMPLES — NAS PENSACOLA SITE 3



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

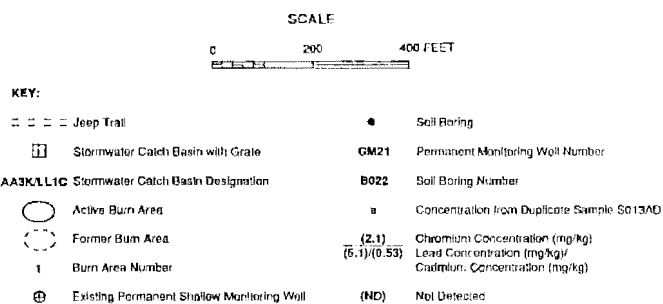


Figure 3-15 CHROMIUM, LEAD, AND CADMIUM CONCENTRATIONS DETECTED IN SOIL SAMPLES — NAS PENSACOLA SITE 3

Clearly, comparatively elevated total metal concentrations were associated with samples collected in or near the burn areas.

Chromium (14 borings), zinc (10 borings), and lead (10 borings) were the most commonly detected metals. Cadmium was detected in samples from five borings, and copper was detected in samples from three borings. The highest chromium, zinc, lead, and cadmium concentrations were detected in the sample from boring B018: chromium, 2.3 mg/kg; zinc, 13 mg/kg; lead, 71 mg/kg; and cadmium, 0.82 mg/kg. The highest copper concentration (25 mg/kg) was detected in the duplicate sample from boring B013, with the second highest level of this metal (21 mg/kg) being detected in the sample from boring B018. The detected chromium, zinc, cadmium, and copper concentrations are well below the RCRA PCALs (400 mg/kg; 16,000 mg/kg; 40 mg/kg; and 2,500 mg/kg, respectively) for these metals. A RCRA PCAL has not been established for lead.

#### **TRPHs**

Figure 3-16 illustrates the distribution of TRPH concentrations detected in the Site 3 soil samples. TRPHs were detected in samples from 24 of the 34 Site 3 soil borings. The highest TRPH concentrations (19,000 mg/kg, 13,000 mg/kg, and 13,000 mg/kg) were detected in soil samples S013A, S025A, and S014A, respectively, collected in burn areas 4, 2, and 6, respectively. In addition, significantly elevated TRPH concentrations ranging from 230 mg/kg to 3,700 mg/kg were detected in the soil samples collected from borings adjacent to the drainage swale opposite and north of burn area 2 (samples S017A and S018A, respectively) and in burn areas 1, 3, 5, and 8 (samples S024A, S026A, S027A, and S015A, respectively). Low levels ( $\leq 23$  mg/kg) of TRPHs were present in the remaining 15 soil samples where this parameter was detected (see Table 3-6 and Figure 3-16).

#### **VOCs**

Aromatic-type VOCs (toluene, ethylbenzene, and/or xylenes) were detected in samples from five of the Site 3 soil borings: B013, B014, B024, B025, and B027 (see Table 3-6 and Figure 3-17). All five borings are located within identified burn areas (areas 4, 6, 1, 2, and 5, respectively) where highly elevated ( $>50$  ppm) soil headspace

readings were recorded. The other soil samples, where aromatic-type VOCs were not detected, were all collected in areas exhibiting lower headspace readings (<50 ppm). Total aromatic-type VOC concentrations were as follows:

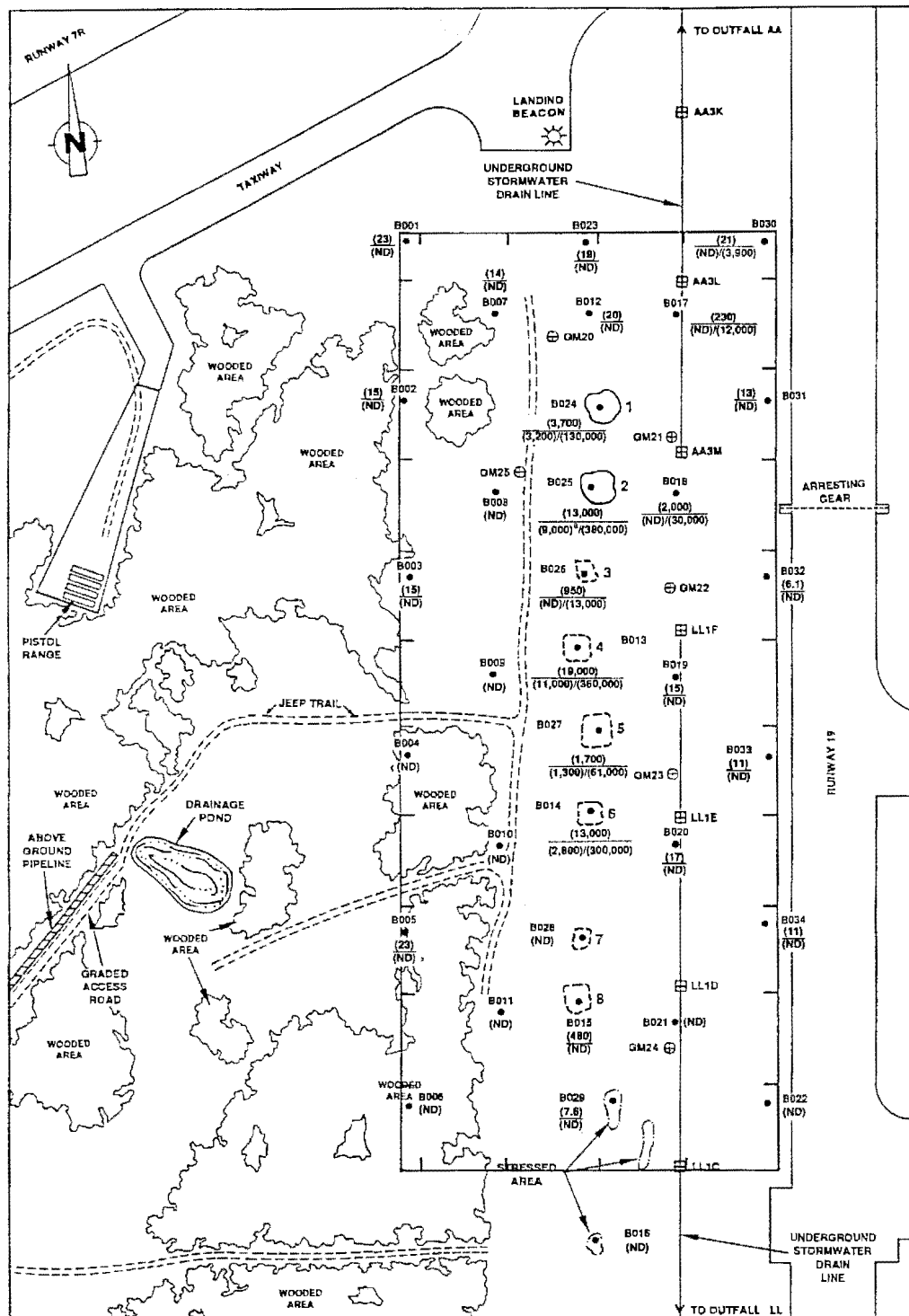
Sample S013A	254,000 µg/kg	Burn area 4
Sample S025AD	187,000 µg/kg	Burn area 2
Sample S014A	50,100 µg/kg	Burn area 6
Sample S024A	10,000 µg/kg	Burn area 1
Sample S027A	2,500 µg/kg	Burn area 5

Xylenes were detected in all five samples at concentrations between 2,500 µg/kg (sample S027A) and 200,000 µg/kg (sample S013A). However, the detected concentrations were well below the RCRA PCAL of 200 million µg/kg for this compound. Toluene was detected in samples collected from only two borings (B013 and B025) at concentrations (30,000 µg/kg and 39,000 µg/kg, respectively) well below the RCRA PCAL of 20 million µg/kg for this compound. Ethylbenzene was detected in samples from three borings (B013, B014, and B025), also at concentrations (7,100 to 18,000 µg/kg) well below the RCRA PCAL of 800,000 µg/kg for this compound.

Methylene chloride was the only halocarbon-type VOC detected, and it was detected only in sample S003A at a concentration (1,000 µg/kg) well below the RCRA PCAL of 90,000 µg/kg for this compound. Although this common laboratory solvent was not detected in the associated laboratory method blank, the low level of methylene chloride detected in sample S003A can probably be attributed to laboratory-derived contamination.

#### PAHs

Figure 3-16 shows the distribution of PAHs detected in the Site 3 soil samples. PAHs were detected only in samples collected from the same five burn area borings (B013, B014, B024, B025, and B027) where aromatic-type VOCs were detected. The highest PAH concentrations (9,000 µg/kg and 11,000 µg/kg) were detected in duplicate sample S025AD and sample S013A, respectively, collected from burn areas 2 and 4,



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

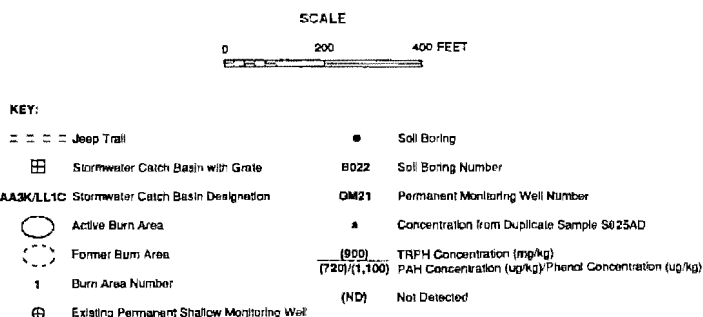
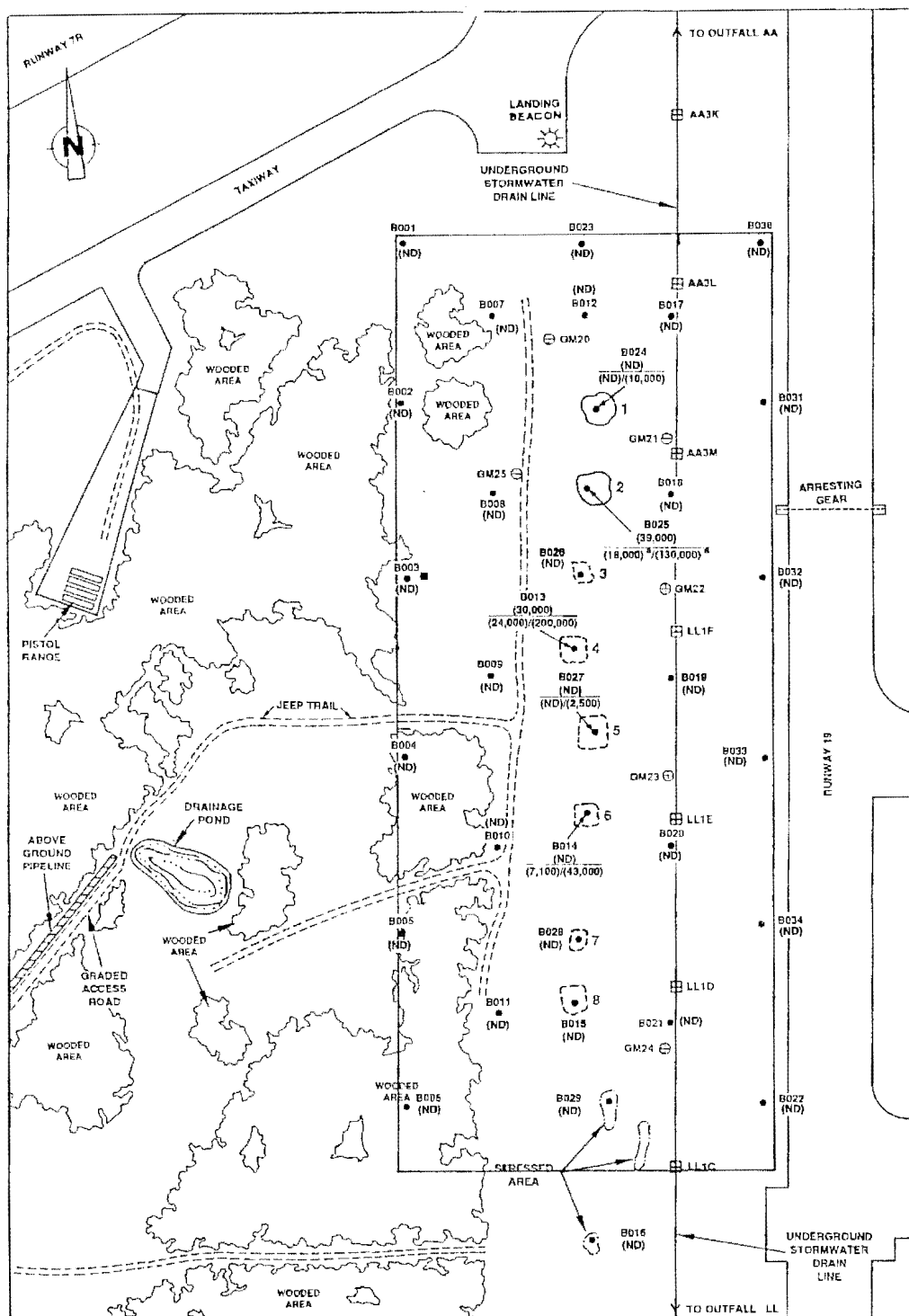
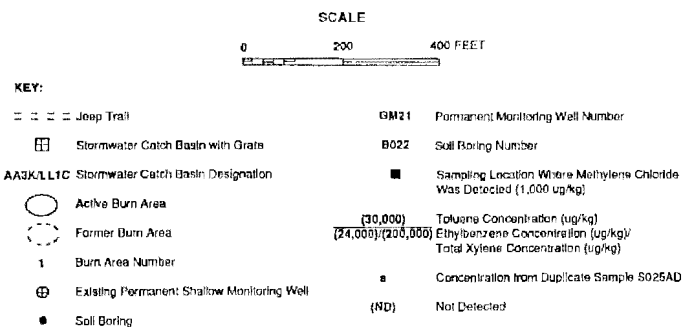


Figure 3-16 TRPH, PAH, AND PHENOL CONCENTRATIONS DETECTED IN SOIL SAMPLES — NAS PENSACOLA SITE 3





SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991



**Figure 3-17 TOLUENE, ETHYLBENZENE, AND TOTAL XYLENE CONCENTRATIONS DETECTED IN SOIL SAMPLES AND SAMPLING LOCATION WHERE METHYLENE CHLORIDE WAS DETECTED — NAS PENSACOLA SITE 3**

respectively. In addition, samples S024A, S027A, and S014A, collected from burn areas 1, 5, and 6, respectively, exhibited PAH concentrations of 3,200 µg/kg, 1,300 µg/kg, and 2,800 µg/kg, respectively.

### Phenols

Figure 3-16 illustrates the distribution of phenol concentrations detected in the Site 3 soil samples. Phenols were detected in samples collected from nine of the Site 3 soil borings: B013, B014, and B024 through B027 (burn areas 4, 6, 1, 2, 3, and 5, respectively); B017 and B018 (drainage swale area northeast of burn area 1 and east of burn area 2, respectively); and B030 (northeast corner of Site 3). The highest phenol concentrations (61,000 to 380,000 µg/kg) were detected in samples collected from the five burn area soil borings (B013, B014, B024, B025, and B027) where aromatic-type VOCs and PAHs (as well as very elevated TRPHs) were detected. Concentrations detected in samples collected from the other four soil borings were 3,900 µg/kg (S030A); 12,000 µg/kg (S017A); 13,000 µg/kg (S026A); and 30,000 µg/kg (S018A); distinctly elevated TRPH concentrations (230 to 2,000 mg/kg) were also detected in these samples, except in S030A (21 mg/kg; see Figure 3-16).

### 3.8.4 GROUNDWATER

#### 3.8.4.1 Field Parameters

Table 3-7 lists the groundwater temperature, pH, and specific conductance values measured in the groundwater samples from the Site 3 temporary and permanent surficial zone monitoring wells. The pH and specific conductance values ranged from 4.4 to 8.6 standard units and 20 micromhos per centimeter (µmhos/cm) to 159 µmhos/cm, respectively. These values are within the range of values reported by Clemens *et al.* (1989) for ambient groundwater in Escambia County; however, the average measured temperature of the Site 3 groundwater samples (26.4°C) is approximately 4°C higher than the average temperature (22.3°C) of 19 groundwater samples collected from the Sand-and-Gravel Aquifer in Escambia County (Clemens *et al.* 1989). No floating or sinking immiscible hydrocarbons were observed in any of the wells; however, oily

Table 3-7

**GROUNDWATER FIELD PARAMETERS  
NAS PENSACOLA SITE 3**

Well Number	Temperature (°C)	pH (units)	Specific Conductance (μmhos/cm)	Date Measured
TW023	27.0	5.9	137	7/25/91
TW024	27.0	5.9	159	7/26/91
TW025	29.0	5.2	90	7/26/91
TW026	28.0	4.8	39	7/24/91
TW027	28.0	4.4	94	7/24/91
TW028	27.0	5.6	28	7/24/91
TW029	27.0	5.3	32	7/24/91
TW030	27.0	4.9	41	7/25/91
TW031	28.0	6.3	100	7/26/91
TW032	27.0	6.3	87	7/26/91
TW033	28.0	5.2	47	7/26/91
TW034	27.0	5.7	56	7/24/91
GM20*	--	--	--	--
GM21	22.0	6.8	80	5/03/91
GM22*	--	--	--	--
GM23	23.0	7.2	30	5/03/91
GM24	24.0	6.6	20	5/03/91
GM25	23.0	8.6	40	5/03/91

14[NASP]UH8039:T0361/617/26

## Key:

\*Well destroyed; could not be measured.

Source: Ecology and Environment, Inc., 1991.

sheens (iridescence) were observed during collection of groundwater samples from temporary monitoring wells TW023, TW024, TW026, and TW027.

Temporary monitoring well information, including field parameter and groundwater elevation data, are presented in Appendix F.

#### 3.8.4.2 Analytical Screening Parameters

Table 3-8 summarizes the analytical screening results for groundwater samples collected from the 12 temporary monitoring wells installed on Site 3. Figure 2-1 shows the locations of the Site 3 temporary monitoring wells. The complete analytical screening results for the groundwater samples are presented in Appendix J.

In general, one or more of the temporary monitoring well samples exhibited elevated concentrations of metals, VOCs, PAHs, and phenols. However, it is possible that the elevated metals concentrations detected in the groundwater samples may reflect leaching or dissolution of aquifer matrix materials entrained in these unfiltered samples by the acid employed as a preservative, rather than actual groundwater contamination (see Section 3.9). TRPHs were detected at low concentrations in only four samples. Pesticides and PCBs were not detected in any of the groundwater samples.

#### Metals

Figure 3-18 shows the distribution of chromium, lead, and cadmium concentrations in the Site 3 temporary and (for reference) permanent monitoring well groundwater samples. Figure 3-19 shows the distribution of total metals concentrations in the Site 3 temporary and (for reference, analytical screening group metals only) permanent monitoring well groundwater samples. As noted on Figure 3-19, the total metals values reported for the samples from temporary wells TW026 through TW029 and TW034 do not include zinc. Because zinc was detected at similar levels in the associated laboratory method blanks, the presence of this metal in these groundwater samples may be attributable to laboratory-derived contamination.

As shown in Table 3-8, chromium, lead, and cadmium were detected in several of the temporary well groundwater samples at concentrations exceeding the corresponding Florida Primary Drinking Water Standards

Table 3-8

**SUMMARY ANALYTICAL SCREENING RESULTS FOR GROUNDWATER SAMPLES  
(FROM TEMPORARY MONITORING WELLS)  
NAS PENSACOLA SITE 3  
(All results in  $\mu\text{g/L}$ , unless noted)**

Parameter	Detection Limit	Sample Number (Location)							FPDWS/ FSDWS
		P03GW023 (TW023)	P03GW024 (TW024)	P03GW025 (TW025)	P03GW026 (TW026)	P03GW027 (TW027)	P03GW027D <sup>a</sup> (TW027)	P03GW028 (TW028)	
Chromium	10	140	78	19	--	150	150	--	50
Zinc	20	64	84	56	31(B)	62(B)	75(B)	24(B)	5,000
Lead	40	160	1,800	740	95	560	580	--	50
Cadmium	5.0	11	--	15	--	7.9	9.5	--	10
Nickel	40	64	--	--	--	--	41	--	
Copper	25	72	89	62	--	160	180	--	1,000
TRPHs (mg/L)	1.0	--	10	11	7.3	5.2	4.4	--	
Benzene	10	--	810 <sup>b</sup>	-- <sup>c</sup>	-- <sup>d</sup>	-- <sup>e</sup>	-- <sup>e</sup>	--	1
Toluene	10	--	-- <sup>b</sup>	3,900 <sup>c</sup>	-- <sup>d</sup>	-- <sup>e</sup>	-- <sup>e</sup>	--	
Total Xylenes	10	--	1,500 <sup>b</sup>	2,400 <sup>c</sup>	220 <sup>d</sup>	1,400 <sup>e</sup>	1,600 <sup>e</sup>	--	
Total PAHs as Benzo-a-pyrene	100	--	200	120	(L)	--	--	--	
Phenols as Trichlorophenol	100	--	1,400	3,700	--	800	930	--	

Key at end of table.

14[NASP]UH8039:T0361/642/5

Table 3-8 (Cont.)

Parameter	Detection Limit	Sample Number (Location)						FPDWS/ FSDWS
		P03GW029 (TW029)	P03GW030 (TW030)	P03GW031 (TW031)	P03GW032 (TW032)	P03GW033 (TW033)	P03GW034 (TW034)	
Chromium	10	--	58	12	11	14	25	50
Zinc	20	24(B)	33	--	30	--	24(B)	5,000
Lead	40	--	--	--	--	--	--	50
Cadmium	5.0	--	5.3	--	5.0	7.3	--	10
Nickel	40	--	--	--	--	--	--	
Copper	25	--	--	--	--	--	--	1,000
TRPHs (mg/L)	1.0	--	--	--	--	--	--	
Benzene	10	-- <sup>b</sup>	--	--	--	--	--	1
Toluene	10	-- <sup>b</sup>	--	--	--	--	--	
Total Xylenes	10	1,200 <sup>b</sup>	--	--	--	--	--	
Total PAHs as Benzo-a-pyrene	100	--	--	--	--	--	--	
Phenols as Trichlorophenol	100	200	--	--	--	--	--	

14[NASP]UH8039:T0361/642/5

## Key:

<sup>a</sup> Duplicate of sample P03GW027.<sup>b</sup> Detection limit for specified parameter increased by a factor of 20 in this sample.<sup>c</sup> Detection limit for specified parameter increased by a factor of 100 in this sample.<sup>d</sup> Detection limit for specified parameter increased by a factor of 5 in this sample.<sup>e</sup> Detection limit for specified parameter increased by a factor of 50 in this sample.

Dash (--) indicates compound not detected.

## Qualifiers:

(B) = Present in method blank.

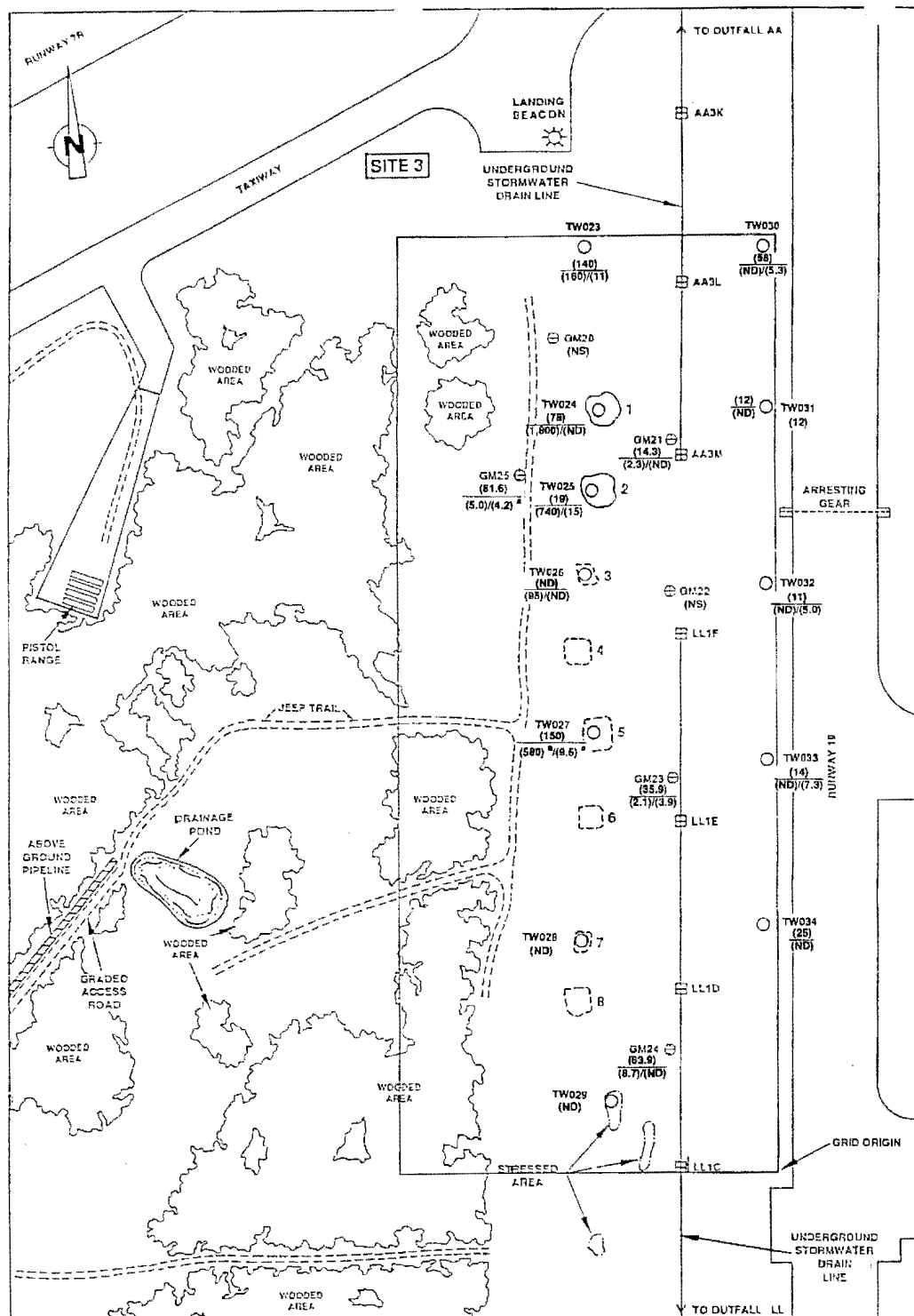
(L) = Present below stated detection limit.

Source: Ecology and Environment, Inc., 1991.

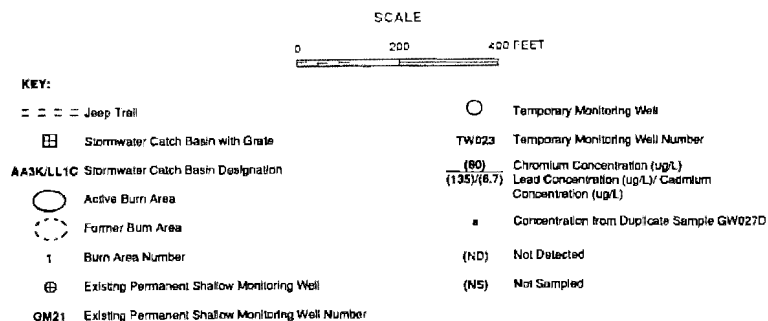
(FPDWSs) of 50 µg/L, 50 µg/L, and 10 µg/L, respectively (FDER 1990a). Zinc and copper were also detected in several samples, but at concentrations well below the Florida Secondary Drinking Water Standards (FSDWSs) of 5,000 µg/L and 1,000 µg/L, respectively (FDER 1990a). Nickel was detected in only two samples, at concentrations well below the Florida Groundwater Guidance Concentration (FGGC) of 150 µg/L (FDER 1989).

As indicated on figures 3-18 and 3-19, elevated metals concentrations were primarily associated with samples from temporary wells completed in burn areas 1 through 3 and 5 (wells TW024 through TW027, respectively) and along the northern site boundary (TW023 and TW030). All of the above burn area temporary well samples contained lead at concentrations (95 to 1,800 µg/L) exceeding the FPDWS of 50 µg/L; two samples (GW024 and GW027) contained chromium at concentrations (78 and 150 µg/L, respectively) exceeding the FPDWS of 50 µg/L; and one sample (GW025) contained cadmium at a concentration exceeding the FPDWS of 10 µg/L (FDER 1990a). The sample from northern boundary temporary well TW023 contained lead (160 µg/L), chromium (140 µg/L), and cadmium (11 µg/L) at concentrations exceeding the above-referenced FPDWSs, and the sample from well TW030 contained chromium (58 µg/L) at a concentration slightly above the FPDWS. All of the other temporary well samples either contained these metals at concentrations well below the FPDWSs or these metals were not detected (see Table 3-8).

The presence of elevated groundwater metals concentrations in the samples collected from burn area wells is consistent with the detected presence of metal and organic contamination of the soils in these areas (see Section 3.8.3). In contrast, the elevated metal concentrations in the two northern site boundary temporary well samples could reflect the possible hydraulically downgradient location of these wells relative to burn areas 1 and 2 (see figures 3-7 and 3-8); however, local sources of the detected metals cannot be discounted. Furthermore, as will be discussed further in Section 3.9, the detected presence of elevated total metals concentrations in the temporary well samples may reflect acid preservative leaching and/or dissolution of aquifer matrix materials entrained in the unfiltered temporary well samples rather than actual groundwater contamination. However, even if metals leaching



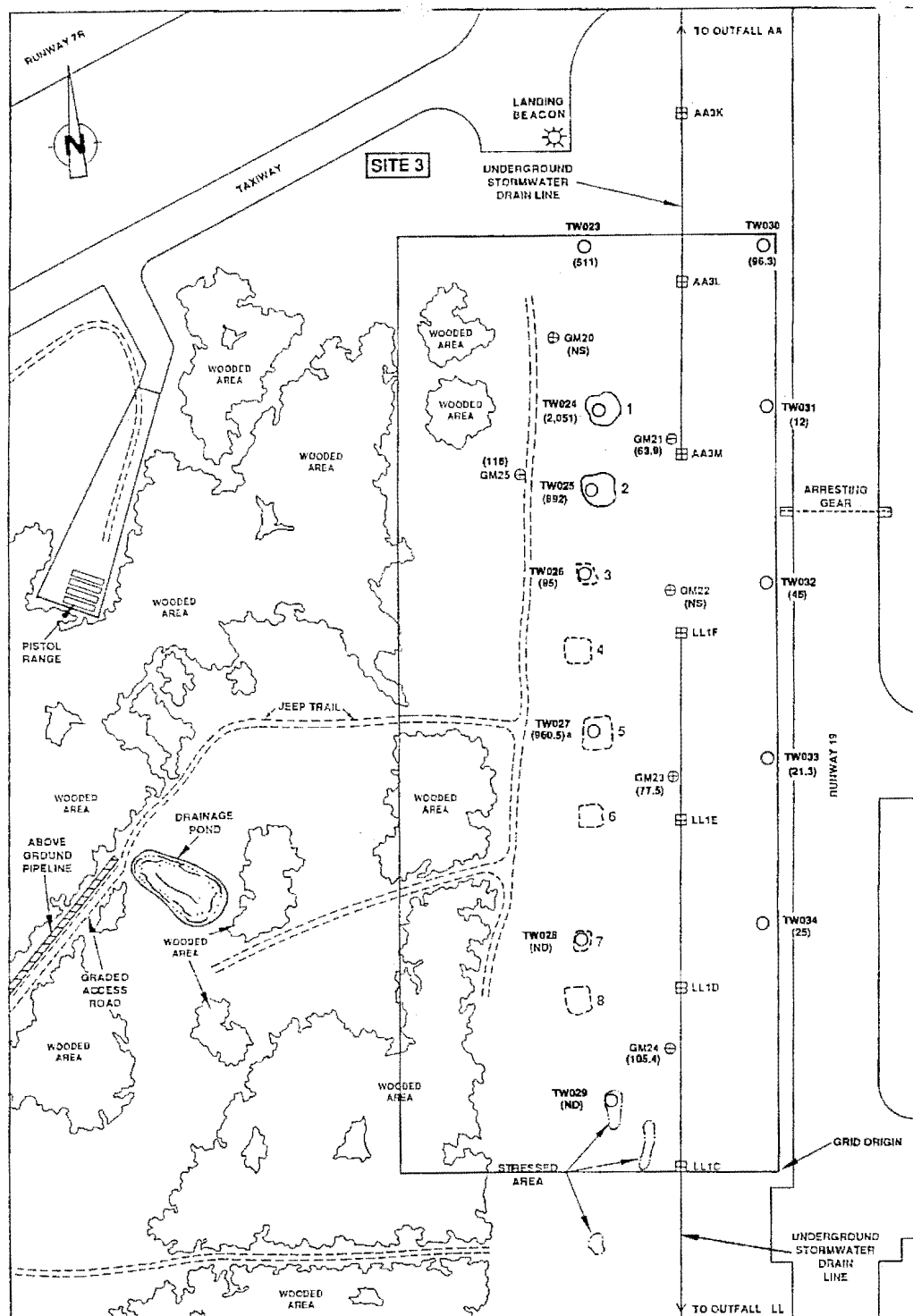
SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991



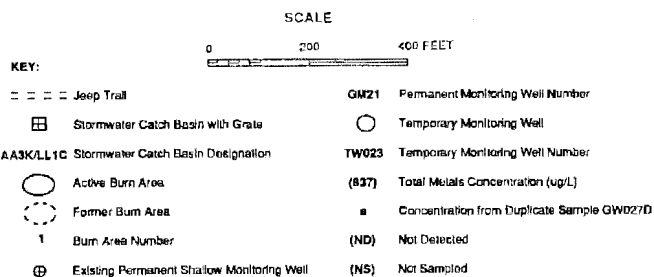
NOTE: The concentration presented for each permanent monitoring well sample is the highest detected concentration, whether total or dissolved.

**Figure 3-18 TOTAL CHROMIUM, LEAD, AND CADMIUM CONCENTRATIONS DETECTED IN GROUNDWATER SAMPLES FROM TEMPORARY AND PERMANENT MONITORING WELLS — NAS PENSACOLA SITE 3**





SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991



NOTE: Total metals concentration presented for each permanent monitoring well groundwater sample is the sum of the higher detected metal concentrations, whether total or dissolved. Also, total metals concentrations presented for samples from temporary monitoring wells TW026, TW027, TW028, TW029, and TW034 do not include zinc.

**Figure 3-19 TOTAL METALS (SCREENING GROUP METALS ONLY) CONCENTRATIONS DETECTED IN GROUNDWATER SAMPLES FROM TEMPORARY AND PERMANENT MONITORING WELLS — NAS PENSACOLA SITE 3**

and/or dissolution from entrained aquifer materials occurred in the temporary monitoring well groundwater samples, the magnitude and distribution of elevated metals concentrations in the temporary well samples suggest that aquifer matrix sediments under portions of Site 3 might have been adversely impacted by metals introduced to the site by burning activities conducted in the on-site burn areas.

#### **TRPHs**

Figure 3-20 shows the distribution of TRPH concentrations in the Site 3 temporary and (for reference) permanent monitoring well samples. TRPHs were detected at low concentrations slightly above the Florida Groundwater Cleanup Standard (FGCS) of 5 mg/L (FDER 1990b) in four temporary well samples (GW024, 10 mg/L; GW025, 11 mg/L; GW026, 7.3 mg/L; and GW027, 5.2 mg/L), collected from burn areas 1, 2, 3, and 5, respectively.

#### **VOCs**

Figure 3-21 shows the distribution of benzene and total benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations in the Site 3 temporary monitoring well and (for reference) permanent monitoring well groundwater samples. BTEX concentrations were detected at concentrations exceeding the FGCS of 50 µg/L (FDER 1990b) in five temporary well samples (GW024, 2,310 µg/L; GW025, 6,300 µg/L; GW026, 220 µg/L; duplicate sample GW027D, 1,600 µg/L; and GW029, 1,200 µg/L), collected in burn areas 1, 2, 3, and 5 and in an apparently stressed area located near the southern site boundary, respectively (see Figure 3-21). In addition, sample GW024 exhibited a benzene concentration of 810 µg/L, significantly greater than the FPDWS of 1 µg/L (FDER 1990a).

#### **PAHs**

Figure 3-20 shows the distribution of PAH concentrations in the Site 3 groundwater samples. Burn area 1 and 2 temporary well samples GW024 and GW025 exhibited PAH concentrations of 200 µg/L and 120 µg/L, respectively, slightly above the potentially applicable FGCSs of 10 µg/L for individual PAHs, excluding naphthalenes, and 100 µg/L for total

naphthalenes (FDER 1990b). In addition, PAHs were detected in sample GW026 at a concentration below the method detection limit of 100 µg/L (see Table 3-8).

### Phenols

Figure 3-20 shows the distribution of phenol concentrations detected in the Site 3 temporary well groundwater samples. Elevated phenol concentrations were detected in four of the temporary monitoring well samples (GW024, 1,400 µg/L; GW025, 3,700 µg/L; duplicate sample GW027, 930 µg/L; and GW029, 200 µg/L) collected in burn areas 1, 2, and 5 and in the apparently stressed area near the southern site boundary, respectively. These concentrations exceed the potentially applicable FGGCs for specific phenolic compounds (e.g., FGGC for phenol is 20 µg/L; FDER 1989).

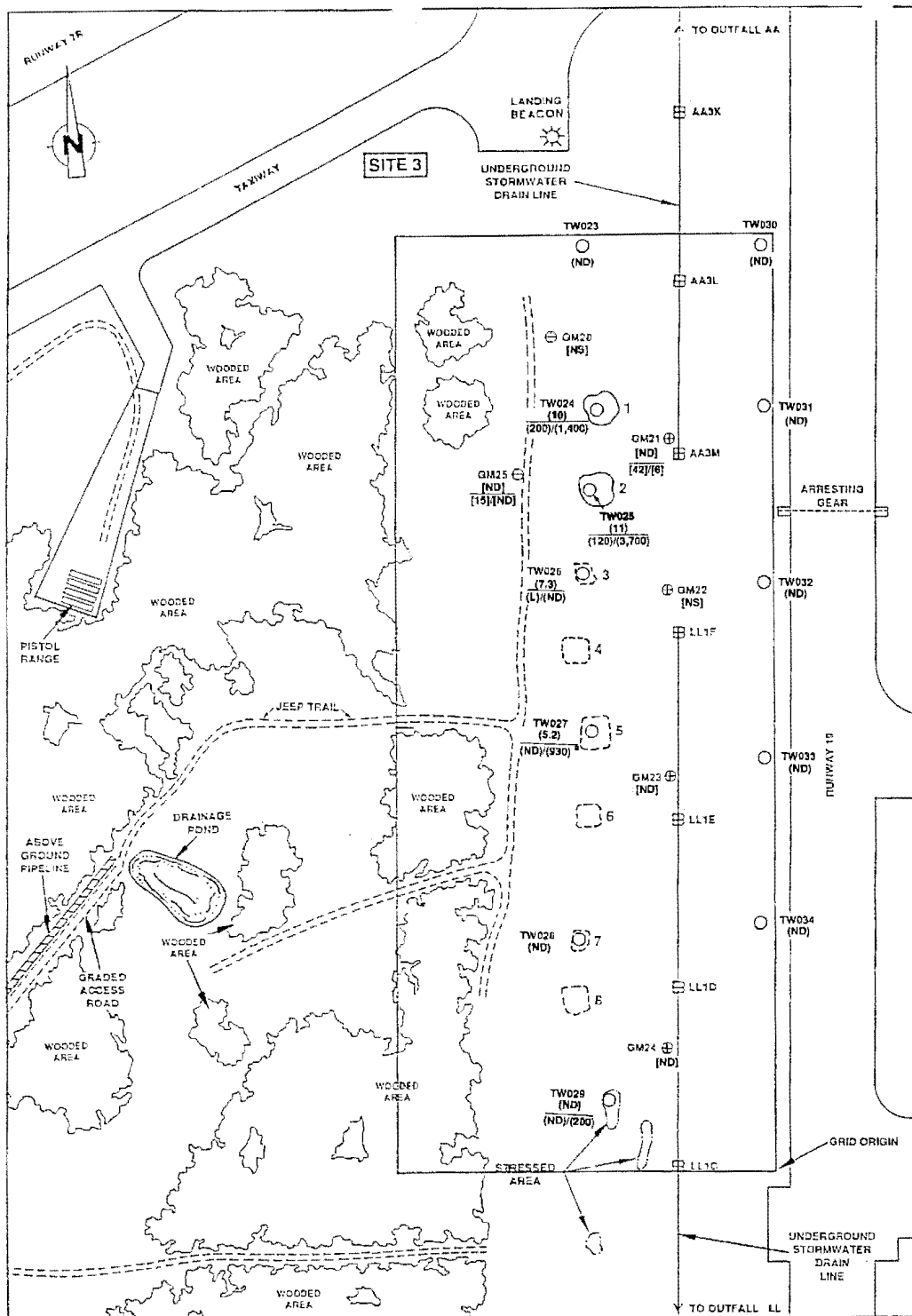
#### 3.8.4.3 TAL/TCL Parameters

Tables 3-9 and 3-10 summarize the analytical results for the groundwater samples collected from four of the six permanent monitoring wells located on Site 3. As previously mentioned, permanent monitoring wells GM20 and GM22 were found to be severely damaged and therefore could not be sampled. The permanent monitoring well groundwater samples were analyzed for the TAL/TCL parameter groups, TRPHs, total alkalinity, total hardness, and total organic carbon. Figures 3-20, 3-21, and 3-22 show the locations of the existing Site 3 permanent monitoring wells. The complete TAL/TCL analytical results are presented in Appendix K.

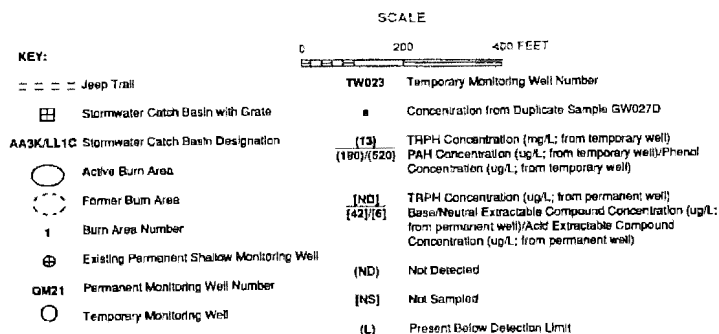
In general, one or more of the permanent well groundwater samples exhibited elevated levels of metals, VOCs, and base/neutral-acid extractable organic compounds (BNAs). TRPHs, cyanide, pesticides, and PCBs were not detected in any of the samples.

### Metals

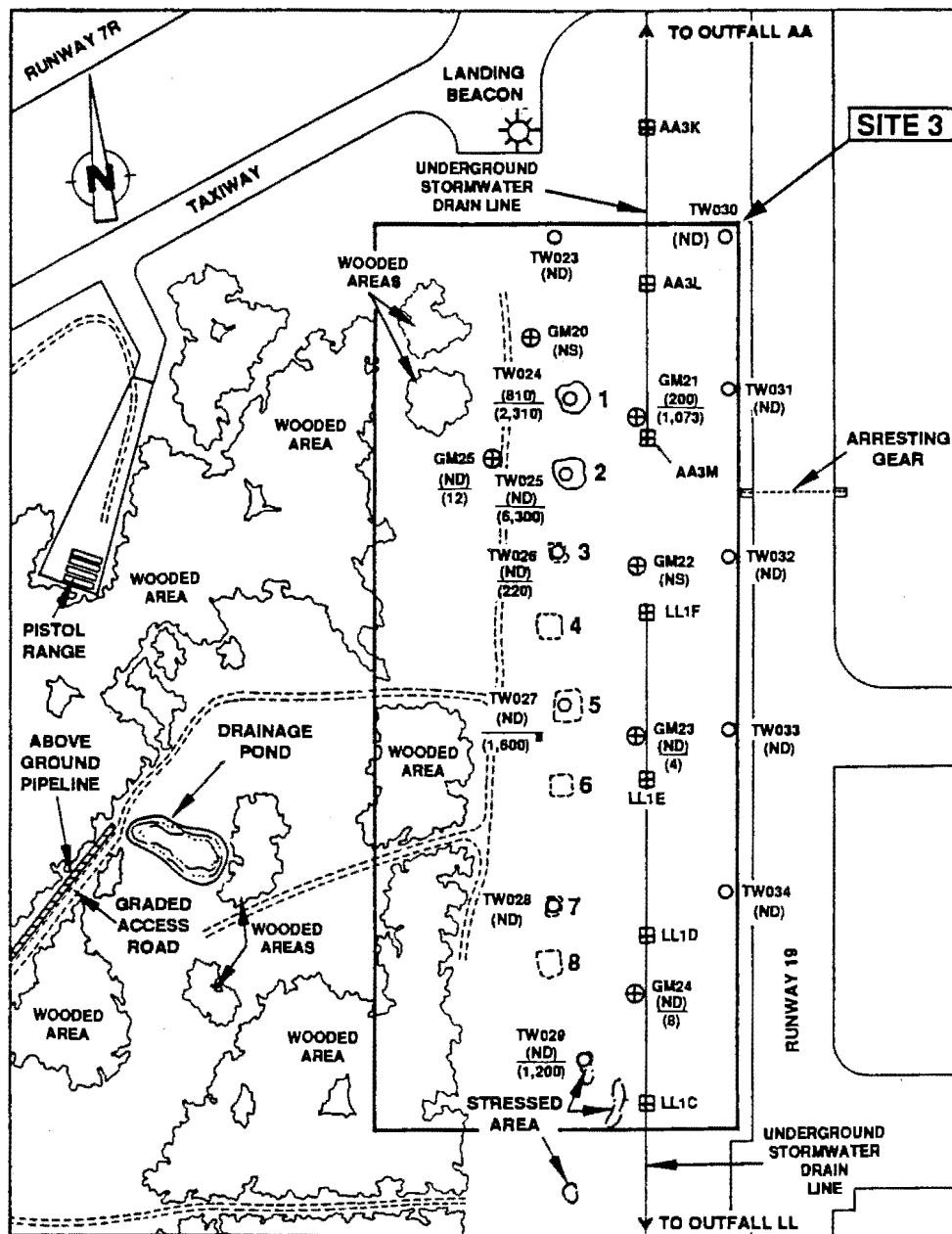
As shown in Table 3-9, five metals (cadmium, calcium, magnesium, sodium, and vanadium) were detected at similar concentrations in both the total and dissolved metals samples. Of these metals, only cadmium and sodium are subject to FPDWSs (10 µg/L and 160,000 µg/L, respectively; FDER 1990a). Cadmium was detected only in two samples, at



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991.



**Figure 3-20 TRPH, PAH — BASE/NEUTRAL EXTRACTABLE COMPOUND (EXCLUDING PHTHALATES), AND PHENOL — ACID EXTRACTABLE COMPOUND CONCENTRATIONS DETECTED IN GROUNDWATER SAMPLES FROM TEMPORARY AND PERMANENT MONITORING WELLS — NAS PENSACOLA SITE 3**



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991

**Figure 3-21 BENZENE AND TOTAL BTEX CONCENTRATIONS DETECTED IN GROUNDWATER SAMPLES FROM TEMPORARY AND PERMANENT MONITORING WELLS — NAS PENSACOLA SITE 3**

Table 3-9

**SUMMARY TAL/TCL ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**  
**(FROM PERMANENT MONITORING WELLS)**  
**NAS PENSACOLA SITE 3**  
**(All results in µg/L, unless noted)**

Parameter	Detection Limit	Sample Number (Well Number)				FPDWS/ FSDWS
		P03W021 (GM21)	P03W023 (GM23)	P03W024 (GM24)	P03W025 (GM25)	
Total Metals						
Aluminum	14	306	3,820	2,470	228	
Barium	5	20.7	9.6	5.7	6.9	1,000
Cadmium	3	--	3.9	--	3.4	10
Calcium	95	8,190	1,060	753	2,940	
Cobalt	5	6.4	8.1	7.6	7.9	
Copper	2	2.8	3.5	3.0	--	1,000
Iron	5	897(E)	643(E)	1,420(E)	619(E)	300
Lead	1	2.3	1.7	8.7	2.3	50
Magnesium	108	1,700	730	933	955	
Manganese	1	11.3	6.2	13.3	5.4	50
Nickel	8	12.7	--	--	--	
Potassium	268	3,060	1,120	--	--	
Sodium	74	5,770	3,000	3,400	4,120	160,000
Vanadium	4	5.4	8.0	6.2	7.0	
Zinc	3	17.2	17.6	13.8	10.2	5,000
Dissolved Metals						
Aluminum	14	103	158	91.3	142	
Antimony	33	52.6	--	--	--	
Barium	5	20.2	--	--	--	1,000
Cadmium	3	--	--	--	4.2	10
Calcium	95	8,510	1,060	762	3,020	
Chromium	9	14.3*	35.9*	63.9*	81.6*	50
Cobalt	5	10.5	9.5	12.4	11.0	
Copper	2	15.2	--	--	--	1,000
Iron	5	621(E)	298(E)	283(E)	758(E)	300
Lead	1	--(W)	2.1	2.7	--	50
Magnesium	108	1,790	659	914	978	
Manganese	1	14.4	11.0	18.3	13.2	50
Nickel	8	--	14.5	16.0	17.7	
Potassium	263	4,190	1,410	1,140	920	
Sodium	74	6,280	3,100	3,290	4,230	160,000
Vanadium	4	6.9	7.2	6.8	7.7	
Zinc	3	19.4	11.3	4.3	4.2	5,000
Organics						
Methylene Chloride	5	43(J) <sup>b</sup>	5	4(B <sup>a</sup> ,J)	4(B <sup>a</sup> ,J)	
Acetone	10	-- <sup>b</sup>	12	8(B <sup>a</sup> ,J)	17(B <sup>a</sup> )	
Carbon Disulfide	5	74 <sup>b</sup>	9	5	17	
Benzene	5	200 <sup>b</sup>	--	--	--	1
Ethylbenzene	5	83 <sup>b</sup>	2(J)	1(J)	2(J)	
Total Xylenes	5	790 <sup>b</sup>	2(J)	7	10	
2,4-Dimethylphenol	10	6(J)	--	--	--	
Naphthalene	10	35	--	--	9(J)	
2-Methylnaphthalene	10	7(J)	--	--	6(J)	
Di-N-Butyl-Phthalate	10	1(J)	1(J)	1(J)	--	
Bis(2-Ethylhexyl) Phthalate	10	7(B <sup>a</sup> ,J)	6(B <sup>a</sup> ,J)	7(B <sup>a</sup> ,J)	4(B <sup>a</sup> ,J)	

14[NASF]UH8039:T0361/633/14

Key, at end of table.

Table 3-9 (Cont.)

Parameter	Detection Limit	Sample Number (Well Number)				FPDWS/ FSDWS
		P03W021 (GM21)	P03W023 (GM23)	P03W024 (GM24)	P03W025 (GM25)	
Tentatively Identified Compounds:**						
Molecular Sulfur		150(J)	--	--	9.0(J)	
Alkylated Benzene Isomer		(3)502(J)	--	--	(2)18(J)	
Dimethyl Benzene Isomer		140(J)	--	--	--	
Ethyl Dimethyl Benzene Isomer		22(J)	--	--	6.0(J)	
Ethyl Methyl Benzene Isomer		42(J)	--	--	--	
Methyl Naphthalene Isomer		--	--	--	5.0(J)	
Trimethyl Benzene Isomer		(2)67(J)	--	--	--	
Unknown Acid		--	27(J)	--	--	
Unknown Hydrocarbon		(2)19(J)	(5)30(J)	(7)43(J)	(3)15(J)	
Unknown Polynuclear Aromatic Hydrocarbon		--	--	--	5(J)	
Unknown Volatile Organic Compound		60(J)	(3)32(J)	8.0(J)	(3)28(J)	
Unknown Extractable Organic Compound		(11)223(J)	(9)226(J)	(5)56(J)	(4)31(J)	
Unknown Extractable Organic Compound		14(B <sup>a</sup> ,J)	49(B <sup>a</sup> ,J)	23(B <sup>a</sup> ,J)	--	
Total Alkalinity (mg/L as CaCO <sub>3</sub> )		25	1.0	--	4.5	
Total Hardness (mg/L as CaCO <sub>3</sub> )		47	2.0	6.0	2.0	
Total Organic Carbon (mg/L)		32	6.7	1.1	3.6	

14[NASP]UH8039:T0361/633/14

Note: The number within parentheses preceding the listed concentration value represents the number of tentatively identified compounds (TICs) in this parameter group. The listed concentration represents the sum of the individual group-member concentration.

## Key:

<sup>b</sup> Detection limit for specified parameter increased by a factor of 10 in this sample.

FPDWS = Florida Primary Drinking Water Standard.

FSDWS = Florida Secondary Drinking Water Standard.

NA = Analyses not performed.

Dash (--) indicates compound not detected.

\*Duplicate analysis not within control limits.

\*\*Values for TICs are estimated; no detection limits were established for TICs.

## Qualifiers:

(B<sup>a</sup>) = Present in method blank.

(E) = Reported value is estimated because of the presence of interference.

(J) = For non-TICs, estimated value; compound present but below detection limit. Also indicates that TIC concentrations are estimated because no detection limits were established for TICs.

Source: Ecology and Environment, Inc., 1991.

Table 3-10

**SUMMARY TAL/TCL ANALYTICAL RESULTS FOR GROUNDWATER FIELD QA/QC SAMPLES  
(FROM PERMANENT MONITORING WELLS)  
NAS PENSACOLA SITE 3  
(All results in  $\mu\text{g/L}$ , unless noted)**

Parameter	Detection Limit	Sample Number (Well Number/Type)						FPDWS/ FSDWS
		P03W025 (GM25)	P03W025D <sup>a</sup> (GM25)	P03WTB06 <sup>b</sup> (Bottle Trip Blank)	P03WFB06 (Field Blank)	P03WRB06 <sup>c</sup> (Sampling Equipment Rinsate)	P03WTB06 <sup>d</sup> (Preservative Blank)	
Total Metals								
Aluminum	14	228	224	NA	--	--	34.1	
Barium	5.0	6.9	5.6	NA	--	--	6.9	1,000
Cadmium	3	3.4	4.0	NA	--	--	--	10
Calcium	95	2,940	2,790	NA	--	--	263	
Chromium	9	--	--	NA	10.5*	--	--	50
Cobalt	5	7.9	8.5	NA	11.1	9.7	12.1	
Copper	2	--	--	NA	--	--	2.1	1,000
Iron	5	619(E)	618(E)	NA	265(E)	68.9(E)	90.2(E)	300
Lead	1	2.3	5.0(S)	NA	--	--(W)	2.0(W)	50
Magnesium	108	955	978	NA	--	--	--	
Manganese	1	5.4	5.5	NA	3.1	1.8	2.2	50
Nickel	8	--	--	NA	13.1	--	--	
Potassium	263	--	--	NA	--	--	346	
Sodium	74	4,120	3,920	NA	264	182	630	160,000
Vanadium	4	7.0	5.3	NA	5.1	4.9	6.2	
Zinc	3	10.2	19.5	NA	17.4	9.7	--	5,000
Dissolved Metals								
Aluminum	14	142	166	NA	20.1	--	NA	
Cadmium	3	4.2	--	NA	--	--	NA	10
Calcium	95	3,020	2,830	NA	114	--	NA	
Chromium	9	81.6*	--	NA	--	--	NA	50
Cobalt	5	11.0	--	NA	--	--	NA	
Copper	1	--	--	NA	2.7	--	NA	1,000
Iron	5	758(E)	480(E)	NA	20.8(E)	39.7(E)	NA	50
Lead	1	--	--	NA	--(W)	--	NA	50
Magnesium	108	978	985	NA	--	--	NA	
Manganese	1	13.2	4.5	NA	2.0	1.3	NA	50
Nickel	8	17.7	--	NA	--	--	NA	
Potassium	263	920	--	NA	--	--	NA	
Sodium	74	4,230	4,020	NA	403	213	NA	160,000
Vanadium	4	7.7	--	NA	--	--	NA	
Zinc	3	4.2	8.2	NA	4.7	10.3	NA	5,000

14[NASP]UH8039:T0361/610/4

Key at end of table.



Table 3-10 (Cont.)

Parameter	Detection Limit	Sample Number (Well Number/Type)						FPDWS/ FSDWS
		P03W025 (GM25)	P03W025D <sup>a</sup> (GM25)	P03WTB06 <sup>b</sup> (Bottle Trip Blank)	P03WFB06 (Field Blank)	P03WRB06 <sup>c</sup> (Sampling Equipment Blank)	P03WPB06 <sup>d</sup> (Preservative Blank)	
Methylene Chloride	5	4(B <sup>a</sup> ,J)	2(J)	28	21,000(E <sup>a</sup> ) <sup>e</sup>	15(B <sup>a</sup> )	25(B <sup>a</sup> )	
Acetone	10	17(B <sup>a</sup> )	13(B <sup>a</sup> )	21(B <sup>a</sup> )	130(B <sup>a</sup> ) <sup>e</sup>	12(B <sup>a</sup> )	19(B <sup>a</sup> )	
Carbon Disulfide	5	17	19	23	---	---	---	
Ethylbenzene	5	2(J)	2(J)	---	---	---	---	
Total Xylenes	5	10	11	---	---	---	---	
Naphthalene	10	9(J)	4(J)	NA	---	---	NA	
2-Methylnaphthalene	10	6(J)	2(J)	NA	---	---	NA	
Bis(2-Ethylhexyl)Phthalate	10	4(B <sup>a</sup> ,J)	4(B <sup>a</sup> ,J)	NA	---	5(B <sup>a</sup> ,J)	NA	
Tentatively Identified Compounds:**								
Molecular Sulfur		9.0(J)	---	---	---	---	---	
Alkylated Benzene Isomer		(2)18(J)	(5)76(J)	---	---	---	---	
Dihydro Methyl 1H-Indene Isomer		---	6.0(J)	---	---	---	---	
Ethyl Dimethyl Benzene Isomer		6.0(J)	---	---	---	---	---	
Methyl Naphthalene Isomer		5.0(J)	---	---	---	---	---	
Unknown Hydrocarbon		(3)15(J)	(5)26(J)	---	(4)24(J)	(4)26(J)	---	
Unknown Polynuclear Aromatic Hydrocarbon		5.0(J)	10(J)	---	---	---	---	
Unknown Volatile Organic Compound		(3)28(J)	5(J)	(2)29(J)	---	(3)30(J)	(3)26(J)	
Unknown Extractable Organic Compound		(4)31(J)	(4)46(J)	---	(2)19(J)	8.0(J)	---	
Unknown Extractable Organic Compound		---	---	---	48(B <sup>a</sup> ,J)	53(B <sup>a</sup> ,J)	---	
Total Alkalinity (mg/L as CaCO <sub>3</sub> )		4.5	4.5	NA	1.5	NA	NA	
Total Hardness (mg/L as CaCO <sub>3</sub> )		2.0	8.0	NA	2.0	3.0	---	
Total Organic Carbon (mg/L)		3.6	3.3	NA	---	NA	NA	

Table 3-10 (Cont.)

Note: The number within parentheses preceding the listed concentration value represents the number of tentatively identified compounds (TICs) in this parameter group. The listed concentration represents the sum of the individual group-member concentrations.

Key:

FPDWS = Florida Primary Drinking Water Standard.

FSDWS = Florida Secondary Drinking Water Standard.

NA = Analyses not performed.

Dash (--) indicates compound not detected.

\*Duplicate analysis not within control limits.

\*\*Values for TICs are estimated; no detection limits were established.

<sup>a</sup>Duplicate of sample P03W025.

<sup>b</sup>Analyzed for VOCs only.

<sup>c</sup>Analyzed for total metals, dissolved metals, TRPHs, cyanide, VOCs, BNAs, pesticides, PCBs, and hardness only.

<sup>d</sup>Analyzed for total metals, TRPHs, cyanide, VOCs, and hardness only.

<sup>e</sup>Detection limit for specified parameter increased by a factor of 10 in this sample.

Qualifiers:

(B<sup>a</sup>) = Present in method blank.

(E) = Reported value is estimated because of the presence of interference.

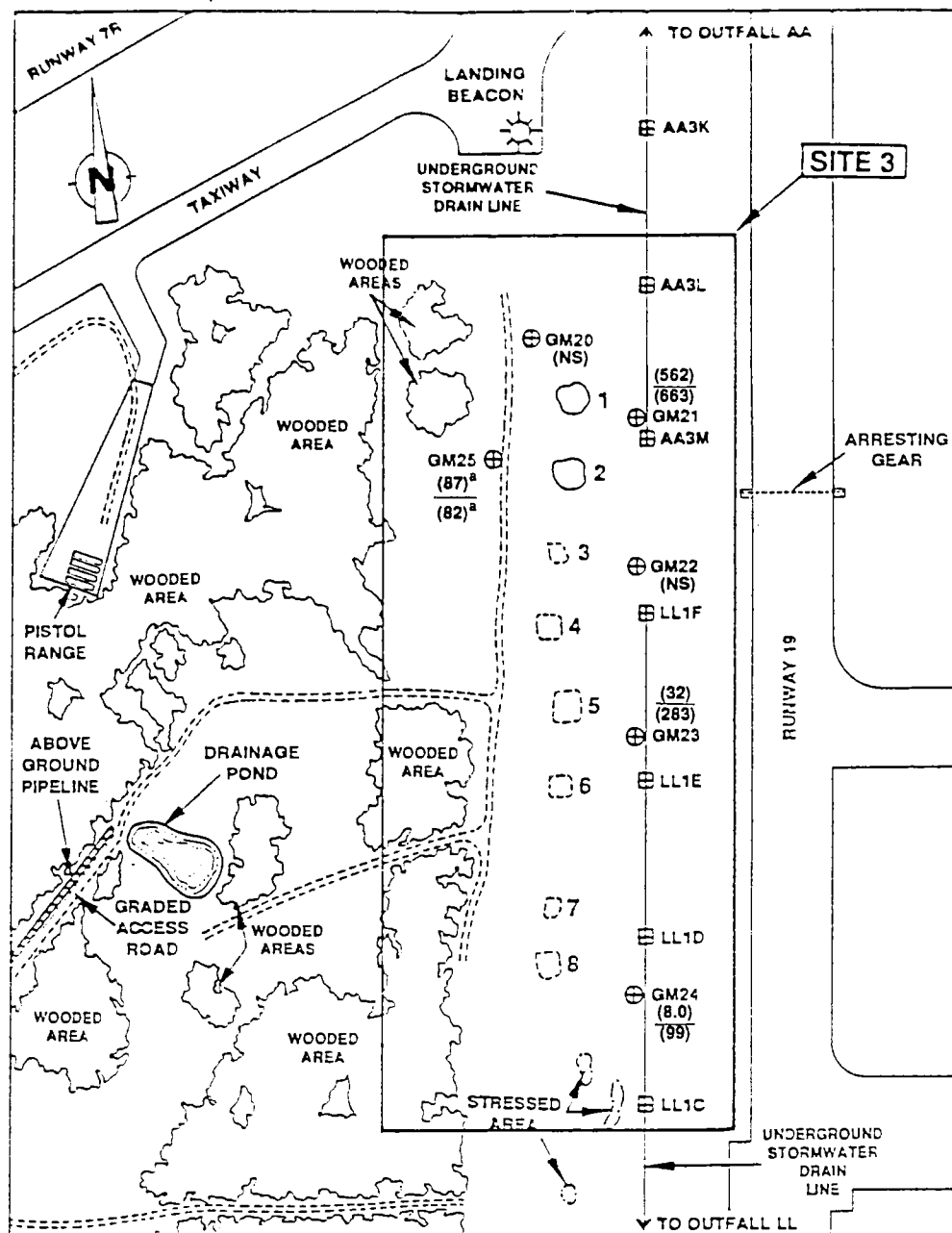
(E<sup>a</sup>) = Identifies compounds with concentrations exceeding calibration range of the GC/MS instrument for the specific analysis.

(J) = For non-TICs, estimated value; compound present but below detection limit. Also indicates that TIC concentrations are estimated because no detection limits were established for TICs.

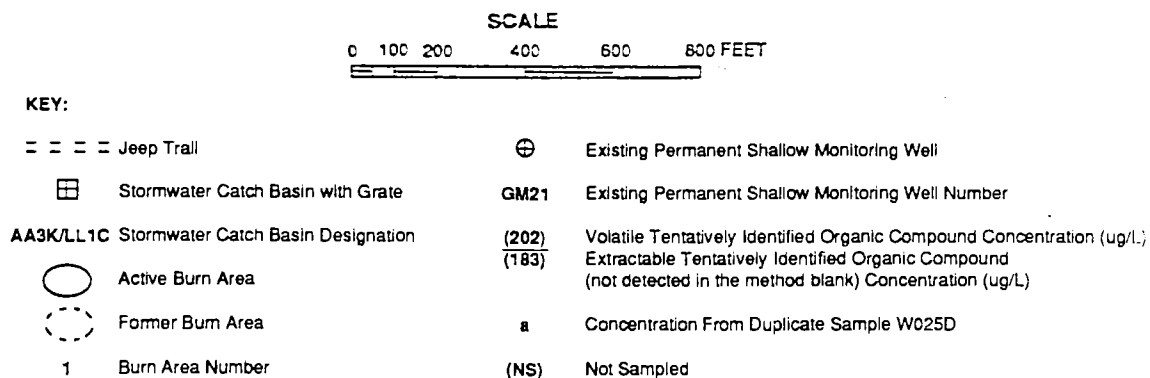
(S) = The reported value was determined by the method of standard additions.

(W) = Post digestion spike for furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

Source: Ecology and Environment, Inc., 1991.



SOURCE: U.S. Naval Air Station, Pensacola, Florida 1991; Ecology and Environment, Inc. 1991



**Figure 3-22 VOLATILE TENTATIVELY IDENTIFIED ORGANIC COMPOUND AND EXTRACTABLE TENTATIVELY IDENTIFIED ORGANIC COMPOUND CONCENTRATIONS DETECTED IN GROUNDWATER SAMPLES FROM PERMANENT MONITORING WELLS — NAS PENSACOLA SITE 3**

concentrations below the FPDWS. Sodium was present in all samples at concentrations below the FPDWS.

With respect to the remaining metals, total (unfiltered) concentrations were generally higher than the dissolved (millipore-filtered) concentrations; however, dissolved (filtered) antimony, chromium, cobalt, manganese, nickel, and potassium concentrations, as shown in Table 3-9, were generally higher than the concentrations present in the total (unfiltered) metals samples. However, as illustrated on Figure 3-18, the highest (total or dissolved) screening group metals concentrations detected in the permanent well samples are only slightly above the lower range of metals concentrations detected in the temporary well samples.

Antimony was detected at a concentration (52.6  $\mu\text{g/L}$ ) above the FGCC of 29  $\mu\text{g/L}$  (FDER 1989) in the dissolved metals sample from well GM21. Cadmium was detected at a concentration well below the FPDWS of 10  $\mu\text{g/L}$  (FDER 1990a) in total metals samples W023 and W025 and in dissolved metals sample W025. Chromium was detected in dissolved metals samples W024 and W025 at concentrations (63.9  $\mu\text{g/L}$  and 81.6  $\mu\text{g/L}$ , respectively) above the FPDWS of 50  $\mu\text{g/L}$  (FDER 1990a).

Iron was detected in all total metals samples and all but two of the dissolved metals samples (W023 and W024) at concentrations exceeding the FSDWS of 300  $\mu\text{g/L}$  (FDER 1990a). In addition, lead was detected in all of the total metals samples and all but two of the dissolved metals samples (W021 and W025) at concentrations well below the FPDWS of 50  $\mu\text{g/L}$ .

On the basis of the data presented above, chromium and iron appear to be the only significant, potential (in terms of magnitude and frequency of occurrence) groundwater metal contaminants present in the Site 3 permanent well samples. However, the occurrences of chromium and iron in the permanent monitoring well samples do not exhibit any distinct distribution patterns. Furthermore, as noted in Section 3.8.4.2, and as will be discussed further in Section 3.9, Site 3 groundwater metals data may actually reflect metals contamination of aquifer matrix materials rather than actual groundwater contamination.

## VOCs

Figure 3-21 shows the benzene and total BTEX concentrations detected in groundwater samples from the Site 3 permanent monitoring wells. Benzene was detected in permanent well sample W021 at a concentration of 200 µg/L, significantly above the FPDWS of 1 µg/L (FDER 1990a). In addition, the total BTEX concentration detected in permanent well sample W021 (1,073 µg/L) significantly exceeds the FGCS of 50 µg/L (FDER 1990b).

Ethylbenzene was also detected in permanent well samples W023 and W025 at a concentration of 2 µg/L (see Table 3-9). Total xylenes were detected in the remaining permanent well samples at concentrations between 2 and 10 µg/L.

Carbon disulfide was detected in all permanent wells samples at concentrations ranging from 5 µg/L to 74 µg/L and is believed to be a laboratory artifact (see Section 3.10.2). Methylene chloride was detected at low concentrations in all samples, and acetone was detected at low concentrations in all samples except W021. However, as will be discussed in Section 3.10, the presence of these commonly used laboratory solvents can be attributed to laboratory-derived contamination.

The above results are not consistent with the Geraghty and Miller (G & M; 1984) analytical results. G & M (1984) reported low levels of one or more of the volatile halocarbon compounds 1,1-dichloroethane; 1,2-dichloroethane; 1,1,1-trichloroethane; and methylene chloride in samples from permanent wells GM20, GM21, and GM23. In contrast, only low to slightly elevated concentrations ( $\leq 790$  µg/L) of purgeable aromatic hydrocarbons were detected in E & E's more recent samples from the Site 3 permanent wells, and no volatile halocarbons were detected in the samples.

In addition to the TCL VOCs discussed above, a number of volatile tentatively identified compounds (TICs) were detected in the permanent monitoring well samples. Figure 3-22 shows the distribution of VOC TICs detected in the permanent monitoring well samples. Table 3-9 lists all TICs detected in the VOC and BNA analyses. Appendix K identifies specific TICs associated with the VOC analyses. In general, samples that exhibited higher TCL VOC concentrations also exhibited higher VOC

TIC concentrations. The highest VOC TIC concentration (562 µg/L) was exhibited by permanent well sample W021.

#### **BNAs**

Figure 3-20 shows the distribution of BNA concentrations detected in the permanent monitoring well samples. Naphthalene and 2-methylnaphthalene were detected in sample W021 (35 µg/L and 7 µg/L, respectively) and sample W025 (9 µg/L and 6 µg/L, respectively). These levels are considerably lower than the FGCS of 100 µg/L for total naphthalenes (FDER 1990b.) Two phthalate compounds were detected in most of the samples (see Table 3-9). Because these compounds are common laboratory contaminants, the presence of these compounds in the samples can be attributed to laboratory-derived contamination (see Section 3.10.2).

As shown on Figure 3-20 and presented in Table 3-9, non-laboratory-derived BNA TICs were detected in all permanent well samples at total concentrations ranging from 82 µg/L to 663 µg/L. Appendix K identifies specific TICs associated with the BNA analyses.

#### **Remediation Parameters**

The Site 3 permanent well groundwater samples were also analyzed for total alkalinity, total hardness, and total organic carbon to support subsequent remedial planning activities at Site 3, if required. Tables 3-9 and 3-10 present the analytical results for these remediation parameters. Overall, the concentrations of the above-listed remediation parameters exhibited a relatively low degree of variability in the permanent well groundwater samples. The highest concentrations of total alkalinity, total hardness, and total organic carbon (25 mg/L, 47 mg/L, and 32 mg/L, respectively) were exhibited by sample W021.

For comparative purposes, regional (i.e., within southern Escambia County) values of these same parameters in the Sand-and-Gravel Aquifer are as follows: alkalinity (as mg/L of CaCO<sub>3</sub>) values range from <1.00 mg/L to 129.97 mg/L (Clemens et al. 1989); total hardness values range from 1.00 mg/L to 326.00 mg/L, with the majority being less than 50 mg/L (Johnson 1991); and total organic carbon values range from 2.88 mg/L to 24.41 mg/L (Clemens et al. 1989). The majority of Site 3 groundwater

samples exhibited values of alkalinity, hardness, and total organic carbon well within the reported ranges of regional values.

### **3.9 CONTAMINATION DISTRIBUTION/SOURCE DISCUSSION**

All four media, surface water, sediment, soil, and groundwater, sampled on and in the vicinity of Site 3 exhibited at least trace levels of five of the contaminant groups (metals, TRPHs, VOCs, PAHs-base/neutral extractables, and phenols-acid extractables) included in the Phase I investigation. For the most part, the detected contamination appears to be clearly associated with and restricted to areas where burning activities were conducted on site. However, the Phase I results do not preclude the possible presence of additional ambient and/or local contaminant sources in the site vicinity. In the following sections, each of the sampled media will be discussed separately regarding the nature, distribution, and potential source(s) of contamination.

#### **3.9.1 Surface Water**

The surface water samples (SW001 and SW003) collected from on-site stormwater catch basins LL1F and AA3M, respectively, were found to contain chromium (sample SW001 only), TRPHs (sample SW003 only), aromatic-type VOCs (BTEX, both samples), and phenols (sample SW003 only). The detected chromium and phenol concentrations exceed the applicable (chromium) or potentially applicable (phenols) FDER Class III Surface Water Quality Standards/Fresh Water. Corresponding standards have not been established for TRPHs and the BTEX compounds. Given that these samples were collected at locations topographically downslope and hydraulically downgradient of the on-site burn areas and that elevated levels of the same contaminants were also detected in the burn area soil and groundwater samples, it appears clear that the detected surface water contamination in the on-site stormwater catch basins reflects contaminant migration from the burn areas via overland stormwater runoff and/or groundwater flow into the drainage swale which discharges into the catch basins.

No contaminants were detected in the surface water sample (SW004) collected from stormwater outfall AA located northwest of Site 3. In contrast, chromium and phenols were detected in duplicate surface water

sample SW002D collected from stormwater outfall LL located south of Site 3, and the detected phenol concentration exceeds the potentially applicable FDER Class III Surface Water Quality Standards/Fresh Water. Given the presence of chromium and phenols on Site 3, the detected presence of these analytes at outfall LL could reflect off-site migration. However, additional off-site and/or ambient sources cannot be discounted.

### 3.9.2 Sediment

The sediment samples (SD001 and SD003) collected from on-site stormwater catch basins LL1F and AA3M, respectively, were found to contain metals (primarily lead), TRPHs, xylenes, PAHs, and phenols (sample SD003 only). As discussed above with respect to the surface water samples, the downslope/downgradient position of these sampling locations with respect to the burn areas and the fact that burn area soil and groundwater samples contained elevated levels of the same contaminants clearly suggest that the detected sediment contamination in the on-site stormwater catch basins reflects contaminant migration from the burn areas via overland stormwater runoff and/or groundwater flow into the drainage swale which discharges into the catch basins.

Chromium, zinc, TPRHs, and PAHs (all at trace to low levels) were detected in sediment sample SD004, collected from stormwater outfall AA located northwest of Site 3. Zinc (low levels), lead (low level, duplicate sample only), and phenols (moderately elevated concentrations) were detected in sediment sample SD002, collected from stormwater outfall LL located south of Site 3. As discussed above with respect to the surface water samples, the detected presence of these analytes at the outfalls could reflect off-site migration, but additional off-site and/or ambient sources cannot be discounted.

### 3.9.3 Soil

The combined results of the soil headspace survey and analysis of soil samples clearly indicate that soil contamination on Site 3 is primarily restricted to burn areas 1 through 6 and adjacent areas (in particular, the drainage swale area located downslope from these burn areas). TRPHs, aromatic-type VOCs, PAHs, and phenols were the primary



contaminant species detected. The distribution and nature of the detected contamination clearly indicate that burning activities within the burn areas and overland runoff from the burn areas into the drainage swale are the primary sources of on-site soil contamination.

It should be noted that although soil headspace readings in the above-defined areas of soil contamination were above the FDER standard of 50 ppm for defining excessively contaminated soils, detected contaminant concentrations in the apparently most contaminated areas (based on headspace) were well below RCRA PCALs (where established). Consequently, even though waste oils or non-fuel materials might have been burned on Site 3, the 50 ppm headspace isopleth appears to be a fairly reliable indicator of the extent of on-site soil contamination.

It should also be noted that additional, localized areas of soil contamination were present on-site and that a number of soil samples collected outside the primary area of soil contamination described above exhibited slightly elevated TRPH concentrations. These data indicate the potential for additional, local sources of on-site contamination and for an ambient source of contamination in the site vicinity, respectively.

#### **3.9.4 Groundwater**

Similar to the extent of soil contamination on Site 3, groundwater contamination on Site 3 is primarily restricted to burn areas 1 through 6 and adjacent areas (in particular, the drainage swale area located downgradient of burn areas 1 and 2). Although no groundwater samples were collected in burn areas 4 and 6, the presence of soil contamination in these areas strongly suggests that, similar to burn areas 1 through 3 and 5, groundwater contamination is also present.

Metals (principally chromium, lead, cadmium, and iron), TRPHs, aromatic-type VOCs, PAHs-base/neutral extractables, and phenols-acid extractables) were the primary groundwater contaminant species detected. At one or more locations, the detected concentrations of one or more of these contamination species exceed the applicable or potentially applicable Florida groundwater standard: FPDWS (metals, benzene); FSDWS (iron); FGCS (TRPHs, total BTEX, PAHs); or FGGC (phenols).

As noted above, Site 3 groundwater contamination is restricted primarily to the vicinity of burn areas 1 through 6. However, samples collected along the northern site boundary (wells TW023 and TW030) exhibited chromium, lead, and/or cadmium concentrations exceeding the corresponding FPDWS; samples collected upgradient of burn area 2 (well GM25) and southeast of burn area 8 (well GM24) exhibited chromium and iron concentrations exceeding the corresponding FPDWS and FSDWS, respectively (both samples also exhibited low-level organic contamination); and the sample collected from the stressed area south of burn area 8, near the southern site boundary (well TW029), contained total xylenes (at a concentration exceeding the FGCS for total BTEX) and phenols. The occurrence of metals along the northern site boundary could reflect downgradient migration of contaminants from burn areas 1 and 2. However, overall, these data indicate the presence or potential presence of localized sources of contamination separate from the primary burn area contaminant sources.

It should be noted that detected metal concentrations in the temporary well groundwater samples may, at least in part, reflect leaching/dissolution of aquifer matrix sediments entrained in these turbid, unfiltered samples by the acid preservative. However, elevated dissolved metal concentrations (e.g., chromium and iron) were detected in one or more of the permanent well samples. Furthermore, total metal concentrations in the temporary well samples located east of the drainage swale (i.e., outside the identified on-site area of soil and groundwater contamination) were lower than total metal concentrations in the nearby permanent wells. Consequently, the very high total metal concentrations detected in the temporary well samples collected within the identified areas of on-site groundwater contamination (i.e., burn areas 1 through 3 and 5) appear to reflect actual groundwater contamination, or at least the presence of metals contamination of aquifer matrix sediments.

### **3.10 QA/QC**

#### **3.10.1 Field QA/QC Samples**

##### **Analytical Screening Parameters**

One surface water field duplicate sample, one sediment field

duplicate sample, two soil field duplicate samples, and one groundwater field duplicate sample were collected for the Site 3 analytical screening samples. The analytical screening results for the field duplicate samples are presented in the summary analytical tables for surface water, sediment, soils, and groundwater samples (see tables 3-4, 3-5, 3-6, and 3-8, respectively). The surface water duplicate sample (SW002D) exhibited a phenols concentration of 230 µg/L, but sample SW002 exhibited no detectable phenols. The samples can be considered in good agreement for the remaining analyses. The results for the duplicate sediment sample (SD002D), duplicate soil samples (S013AD and SD025AD), and duplicate groundwater sample (GW027D) are in overall good agreement, within acceptable limits, with the original samples.

#### **TAL/TCL Samples**

One field duplicate sample, one bottle trip blank, one field blank, one sampling equipment rinsate blank, and one preservative blank were collected for the Site 3 TAL/TCL groundwater samples. The analytical results for Site 3 QA/QC samples are summarized in Table 3-10. Complete analytical results for the QA/QC samples are presented in Appendix K. The results for groundwater duplicate sample W025D are in overall good agreement, within acceptable limits, with the results for original sample W025. Methylene chloride and acetone were detected in all of the groundwater field QA/QC samples. Carbon disulfide was detected in original sample W025, duplicate sample W025D, and trip blank TB06. Bis(2-ethylhexyl)phthalate was detected in original sample W025 duplicate sample W025D, and rinsate blank RB06. Cobalt, iron, manganese sodium, and vanadium were detected in all the blanks, except TB06, which was analyzed for VOCs only. Zinc was detected in rinsate blank RB06 and field blank FB06. Aluminum, calcium, and copper were detected in preservative blank PB06 and field blank FB06. Barium, lead, and potassium were also detected in preservative blank PB06, and chromium and nickel were detected in field blank FB06. Dissolved lead spike recoveries were not within control limits for rinsate blank RB06, field blank FB06, and sample W021. In addition, total lead spike recoveries were not within control limits for rinsate sample RB06 and preservative sample PB06. All spike recoveries for all remaining analyses are within

control limits specified in Section 9.2 of the GQAPP. In addition, one or more TICs were detected in each of the field QA/QC blanks. The detected contaminants in each of the various blanks are of little significance given that: the detected contaminants were also present in the associated laboratory analytical method blanks and can therefore be attributed to laboratory-derived contamination; the detected contaminants do not represent significant on-site contaminants; and the detected contaminant levels were too low to significantly impact interpretation of the sample analytical results for each of the sampled media.

### **3.10.2 Laboratory QA/QC Samples Analytical Screening Samples**

Zinc was detected in the surface water analytical method blank and in one groundwater analytical method blank. Because similar concentrations of zinc were detected in all but one of the surface water samples and in groundwater samples GW026, GW027, GW027D, GW028, GW029, and GW034, the presence of this metal in the surface water samples and the above-listed groundwater samples can be attributed to laboratory-derived contamination. In addition, a trace level of methylene chloride equal to the analytical method detection limit for this compound was detected in one soil sample (S003A; see Table 3-6), but no methylene chloride was detected in the associated analytical method blank. However, given that this common laboratory contaminant was detected at a trace level in only one sample, which exhibited no organic contaminants other than a low level of TRPHs, the occurrence of methylene chloride detected in this sample can be attributed to laboratory-derived contamination. All spike recoveries for the screening analyses were within acceptable limits.

### **TAL/TCL Samples**

Methylene chloride, acetone, bis(2-ethylhexyl)phthalate, and a number of TICs (extractable unknown compounds) were each detected in one or more of the TAL/TCL groundwater samples and the associated method blanks. Therefore, the presence of these common laboratory-derived contaminants in the TAL/TCL groundwater samples can be attributed to laboratory-derived contamination. Carbon disulfide was detected at low

concentrations in all of the samples but in none of the analytical method blanks. However, upon reanalysis, no carbon disulfide was detected in any of the samples. Consequently, carbon disulfide detected in the permanent well samples probably represents a laboratory artifact not native to the permanent well samples. In addition, di-N-butyl phthalate was detected in most of the groundwater samples but in none of the analytical method blanks. The trace levels of di-N-butyl phthalate detected in the TAL/TCL groundwater samples can most likely be attributed to laboratory-derived contamination. Surrogate spike recovery criteria were not met for the BNA method blank. All other spike recoveries were within acceptable control limits as specified in Section 9.2 of the GQAPP. Additional laboratory QA/QC comments regarding the TAL/TCL samples analyses are presented in tables 3-9 and 3-10.

#### 4. CONCLUSIONS

Surface water, sediment, soil, and surficial zone groundwater contamination are present on Site 3. Most of the detected contamination is restricted to and clearly associated with areas where burning activities were conducted on site and the adjacent areas. Furthermore, although the Phase I results also indicate the potential presence of localized on-site, additional off-site, and ambient sources of contamination, overall it appears that little off-site migration of contaminants has occurred. In particular, the presence of surface water and/or sediment contamination in samples collected from the stormwater outfalls located north and south of Site 3 could reflect off-site and/or ambient sources.

Metals (chromium, lead, cadmium, and iron), TRPHs, aromatic-type VOCs, PAHs-base/neutral extractables, and phenols-acid extractables are the primary on-site contaminants. On-site surface water (catch basins LL1F and AA3M) and groundwater samples contained one or more of these contaminant species at concentrations exceeding applicable or potentially applicable Florida water quality standards. Soil sample contaminant concentrations were well below RCRA PCALs, where established; however, soil headspace concentrations within and adjacent to burn areas 1 through 6 were well above the 50 ppm Florida criterion for excessively contaminated soils.

Additional assessment activities will be required at Site 3. Furthermore, Interim Remedial Measures should be implemented to address the presence of excessively contaminated soils in and adjacent to burn areas 1 through 6.

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6. FLORIDA PROFESSIONAL GEOLOGIST SEAL

I hereby affix my seal to the Interim Data Report for Crash Crew Training Area (Site 3), located at the Naval Air Station in Pensacola, Escambia County, Florida, in accordance with Chapter 492 of the Florida Statutes and applicable rules and regulations developed pursuant thereto:

Name: Barry R. Levine

License Number: P.G. No. 259

State: Florida

Expiration Date: July 31, 1994

Barry R. Levine  
Barry R. Levine  
11-19-92  
Date

APPENDIX A

BIRDS OBSERVED DURING HABITAT/BIOTA SURVEY

Table A-1

BIRDS OBSERVED DURING HABITAT/BIOTA SURVEY  
OCTOBER 1990

Mature pine forest, including grassy margins along dirt roads and thickets bordering forests.

Cardinal	<u>Cardinalis cardinalis</u>
Bluejay	<u>Cyanocitta cristata</u>
Gray Catbird	<u>Dumetella carolinensis</u>
Northern Mockingbird	<u>Mimus polyglottos</u>
Rufous-sided Towhee	<u>Pipilo erythrophthalmus</u>
Boat-tailed Grackle	<u>Quiscalus major</u>
Common Grackle	<u>Quiscalus quiscula</u>
Eastern Phoebe	<u>Sayornis phoebe</u>
Carolina Wren	<u>Thryothorus ludovicianus</u>
Brown Thrasher	<u>Toxostoma rufum</u>
House Wren	<u>Troglodytes aedon</u>
Yellow-throated Vireo	<u>Vireo flavifrons</u>
White-eyed Vireo	<u>Vireo griseus</u>
Mourning Dove	<u>Zenaida macroura</u>

Upland mature hardwood forest with some mix of pines.

Red-tailed Hawk	<u>Buteo jamaicensis</u>
Bluejay	<u>Cyanocitta cristata</u>
Prairie Warbler	<u>Dendroica discolor</u>
Mississippi Kite	<u>Ictinia mississippiensis</u>
Northern Mockingbird	<u>Mimus polyglottos</u>
Tufted Titmouse	<u>Parus bicolor</u>
Carolina Chickadee	<u>Parus carolinensis</u>
Ruby Crowned Kinglet	<u>Regulus calendula</u>
Golden Crowned Kinglet	<u>Regulus satrapa</u>
Ovenbird	<u>Seiurus aurocapillus</u>
Nashville Warbler	<u>Vermivora ruficapilla</u>
Mourning Dove	<u>Zenaida macroura</u>

Beachfront, including shoreline along waterfront apron; Pensacola Bay open water; Bayou Grande open water; shoreline along dredge spoil fill area; interior mudflats of dredge spoil fill area; and primary dune/scrubby areas of beach.

Great Blue Heron	<u>Ardea herodias</u>
Ruddy Turnstone	<u>Arenaria interpres</u>
Sanderling	<u>Calidris alba</u>
Least Sandpiper	<u>Calidris minutilla</u>
Semi-palmated Sandpiper	<u>Calidris pusilla</u>
Willet	<u>Catoptrophorus semipalmatus</u>
Belted Kingfisher	<u>Ceryle alcyon</u>
Semi-palmated Plover	<u>Charadrius semipalmatus</u>
Killdeer	<u>Charadrius vociferus</u>
Eastern Wood Pewee	<u>Contopus borealis</u>
Fish Crow	<u>Corvus ossifragus</u>
Bluejay	<u>Cyanocitta cristata</u>
Little Blue Heron	<u>Egretta caerulea</u>
Acadian Flycatcher	<u>Empidonax virescens</u>
Herring Gull	<u>Larus argentatus</u>
Laughing Gull	<u>Larus atricilla</u>
Short-billed Dowitcher	<u>Limnodromus griseus</u>
Northern Mockingbird	<u>Mimus polyglottos</u>
Osprey	<u>Pandion haliaetus</u>
Brown Pelican	<u>Pelecanus occidentalis</u>
Double Crested Cormorant	<u>Phalacrocorax auritus</u>
Black-bellied Plover	<u>Pluvialis squatarola</u>
Chipping Sparrow	<u>Spizella passerina</u>
Roseate Tern	<u>Sterna dougallii</u>
Common Tern	<u>Sterna hirundo</u>
Royal Tern	<u>Sterna maxima</u>
Forester's Tern	<u>Sterna porsteri</u>
Sandwich Tern	<u>Sterna sandircensis</u>
Tree Swallow	<u>Tachycineta bicolor</u>
House Wren	<u>Troglodytes aedon</u>
Mourning Dove	<u>Zenaida macroura</u>



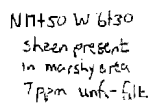
**Marshland, including emergent vegetation found along Bayou Grande,  
Pensacola Bay, and brackish-water ponds.**

Red-winged Blackbird	<u>Agelaius phoeniceus</u>
Northern Shoveler	<u>Anas clypeata</u>
Green-winged Teal	<u>Anas crecea</u>
Blue-winged Teal	<u>Anas discors</u>
Mottled Duck	<u>Anas fulvigula</u>
Great Blue Heron	<u>Ardea herodias</u>
Lesser Scaup	<u>Aythya affinis</u>
Cardinal	<u>Cardinalis cardinalis</u>
Great Egret	<u>Casmerodius albus</u>
Belted Kingfisher	<u>Ceryle alcyon</u>
Northern Flicker	<u>Colaptes auratus</u>
Bluejay	<u>Cyanocitta cristata</u>
Yellow-rumped Warbler	<u>Dendroica coronata</u>
Little Blue Heron	<u>Egretta caerulea</u>
Snowy Egret	<u>Egretta thula</u>
Tricolored Heron	<u>Egretta tricolor</u>
American Coot	<u>Fulica americana</u>
Yellowthroat	<u>Geothlypis trichas</u>
Northern Mockingbird	<u>Mimus polyglottos</u>
Osprey	<u>Pandion haliaetus</u>
Rufous-sided Towhee	<u>Pipilo erythrophthalmus</u>
Pied-billed Grebe	<u>Podilymbus podiceps</u>
Forester's Tern	<u>Sterna forsteri</u>
House Wren	<u>Troglodytes aedon</u>
Mourning Dove	<u>Zenaida macroura</u>

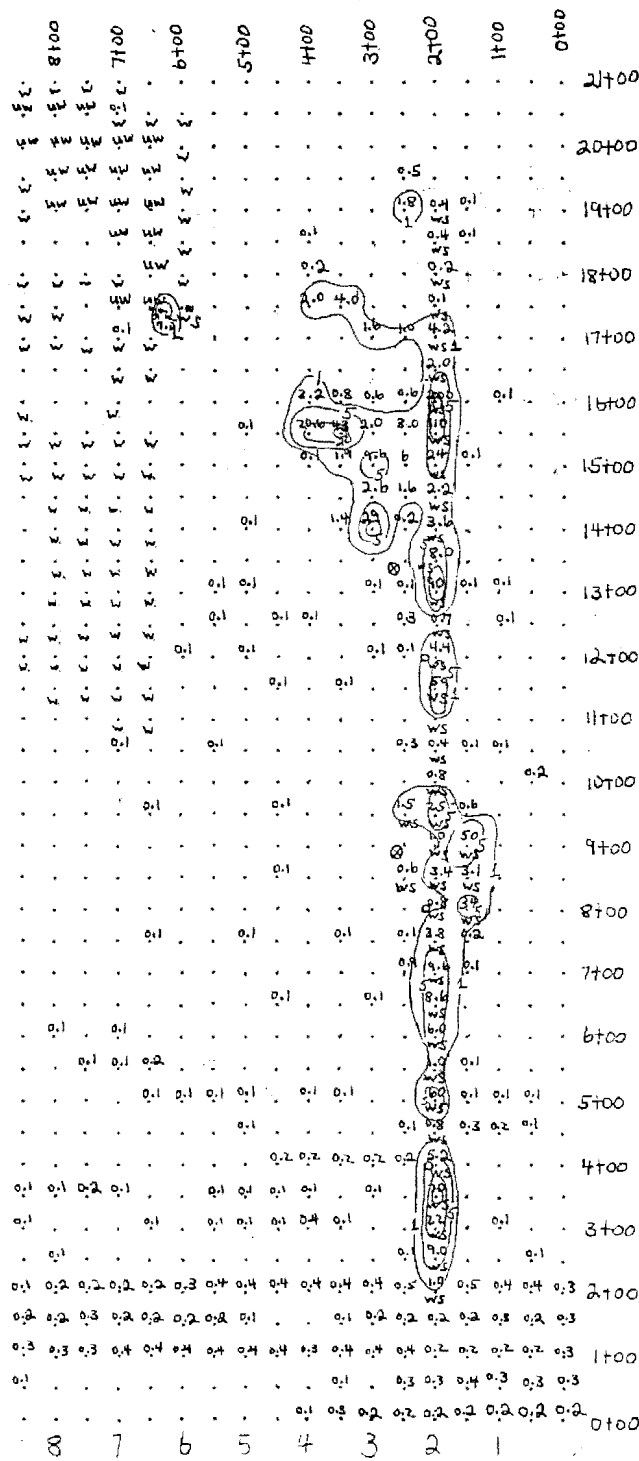
Forested wetland area, including mature hardwoods and thick undergrowth mixed with emergent vegetation such as cattails.

Cardinal	<u>Cardinalis cardinalis</u>
American Goldfinch	<u>Carduelis tristis</u>
Marsh Wren	<u>Cistothorus palustris</u>
Northern Flicker	<u>Colaptes auratus</u>
Bluejay	<u>Cyanocitta cristata</u>
Prairie Warbler	<u>Dendroica discolor</u>
Wood Thrush	<u>Hylocichla mustelina</u>
Northern Mockingbird	<u>Mimus polyglottos</u>
Yellow-bellied Sapsucker	<u>Sphyrapicus varius</u>
Brown Thrasher	<u>Toxostoma rufum</u>

APPENDIX B  
SURFACE EMISSIONS DATA



B = burn area  
W = wet area (marshy)  
S = Sheen present  
no plotted value = 0.0 ppm detected  
UW = Under water  
D = Stormwater Drain  
⊕ = Existing permanent monitoring well

$$1'' = 200\text{ft}$$


**B-1 SURFACE EMISSIONS SURVEY MAP —  
NAS PENSACOLA SITE 3**

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N0+00W0+00	0.0	0.2
N0+00W0+50	0.0	0.2
N0+00W1+00	0.0	0.2
N0+00W1+50	0.0	0.2
N0+00W2+00	0.0	0.2
N0+00W2+50	0.0	0.2
N0+00W3+00	0.0	0.2
N0+00W3+50	0.0	0.3
N0+00W4+00	0.0	0.1
N0+00W4+50	0.0	0.0
N0+00W5+00	0.0	0.0
N0+00W5+50	0.0	0.0
N0+00W6+00	0.0	0.0
N0+00W6+50	0.0	0.0
N0+00W7+00	0.0	0.0
N0+00W7+50	0.0	0.0
N0+00W8+00	0.0	0.0
N0+00W8+50	0.0	0.0
N0+50W0+00	0.0	0.3
N0+50W0+50	0.0	0.3
N0+50W1+00	0.0	0.3
N0+50W1+50	0.0	0.4
N0+50W2+00	0.0	0.3
N0+50W2+50	0.0	0.3
N0+50W3+00	0.0	0.0
N0+50W3+50	0.0	0.1
N0+50W4+00	0.0	0.0
N0+50W4+50	0.0	0.0
N0+50W5+00	0.0	0.0
N0+50W5+50	0.0	0.0
N0+50W6+00	0.0	0.0
N0+50W6+50	0.0	0.0
N0+50W7+00	0.0	0.0
N0+50W7+50	0.0	0.0
N0+50W8+00	0.0	0.0
N0+50W8+50	0.0	0.1
N1+00W0+00	0.0	0.3
N1+00W0+50	0.0	0.2
N1+00W1+00	0.0	0.2
N1+00W1+50	0.0	0.2
N1+00W2+00	0.0	0.2
N1+00W2+50	0.0	0.4
N1+00W3+00	0.0	0.4
N1+00W3+50	0.0	0.4
N1+00W4+00	0.0	0.3

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N1+00W4+50	0.0	0.4
N1+00W5+00	0.0	0.4
N1+00W5+50	0.0	0.4
N1+00W6+00	0.0	0.4
N1+00W6+50	0.0	0.4
N1+00W7+00	0.0	0.4
N1+00W7+50	0.0	0.3
N1+00W8+00	0.0	0.3
N1+00W8+50	0.0	0.3
N1+50W0+00	0.0	0.3
N1+50W0+50	0.0	0.2
N1+50W1+00	0.0	0.3
N1+50W1+50	0.0	0.2
N1+50W2+00	0.0	0.2
N1+50W2+50	0.0	0.2
N1+50W3+00	0.0	0.2
N1+50W3+50	0.0	0.1
N1+50W4+00	0.0	0.0
N1+50W4+50	0.0	0.0
N1+50W5+00	0.0	0.1
N1+50W5+50	0.0	0.2
N1+50W6+00	0.0	0.2
N1+50W6+50	0.0	0.2
N1+50W7+00	0.0	0.2
N1+50W7+50	0.0	0.3
N1+50W8+00	0.0	0.2
N1+50W8+50	0.0	0.2
N10+00W0+00	0.0	0.0
N10+00W0+50	0.0	0.2
N10+00W1+00	0.0	0.0
N10+00W1+50	0.0	0.0
N10+00W2+00	0.0	0.8
N10+00W2+50	0.0	0.0
N10+00W3+00	0.0	0.0
N10+00W3+50	0.0	0.0
N10+00W4+00	0.0	0.0
N10+00W4+50	0.0	0.0
N10+00W5+00	0.0	0.0
N10+00W5+50	0.0	0.0
N10+00W6+00	0.0	0.0
N10+00W6+50	0.0	0.0
N10+00W7+00	0.0	0.0
N10+00W7+50	0.0	0.0
N10+00W8+00	0.0	0.0
N10+00W8+50	0.0	0.0

PAGE NO. 3  
09/27/91

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N10+50W0+00	0.0	0.0
N10+50W0+50	0.0	0.0
N10+50W1+00	0.0	0.1
N10+50W1+50	0.0	0.1
N10+50W2+00	0.0	0.4
N10+50W2+50	0.0	0.3
N10+50W3+00	0.0	0.0
N10+50W3+50	0.0	0.0
N10+50W4+00	0.0	0.0
N10+50W4+50	0.0	0.0
N10+50W5+00	0.0	0.0
N10+50W5+50	0.0	0.1
N10+50W6+00	0.0	0.0
N10+50W6+50	0.0	0.0
N10+50W7+00	0.0	0.1
N10+50W7+50	0.0	0.0
N10+50W8+00	0.0	0.0
N10+50W8+50	0.0	0.0
N11+00W0+00	0.0	0.0
N11+00W0+50	0.0	0.0
N11+00W1+00	0.0	0.0
N11+00W1+50	0.0	0.0
N11+00W2+00	0.0	0.0
N11+00W2+50	0.0	0.0
N11+00W3+00	0.0	0.0
N11+00W3+50	0.0	0.0
N11+00W4+00	0.0	0.0
N11+00W4+50	0.0	0.0
N11+00W5+00	0.0	0.0
N11+00W5+50	0.0	0.0
N11+00W6+00	0.0	0.0
N11+00W6+50	0.0	0.0
N11+00W7+00	0.0	0.0
N11+00W7+50	0.0	0.0
N11+00W8+00	0.0	0.0
N11+00W8+50	0.0	0.0
N11+50W0+00	0.0	0.0
N11+50W0+50	0.0	0.0
N11+50W1+00	0.0	0.0
N11+50W1+50	0.0	0.0
N11+50W2+00	0.0	59
N11+50W2+50	0.0	0.0
N11+50W3+00	0.0	0.0
N11+50W3+50	0.0	0.1
N11+50W4+00	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
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N11+50W4+50	0.0	0.1
N11+50W5+00	0.0	0.0
N11+50W5+50	0.0	0.0
N11+50W6+00	0.0	0.0
N11+50W6+50	0.0	0.0
N11+50W7+00	0.0	0.0
N11+50W7+50	0.0	0.0
N11+50W8+00	0.0	0.0
N11+50W8+50	0.0	0.0
N12+00W0+00	0.0	0.0
N12+00W0+50	0.0	0.0
N12+00W1+00	0.0	0.0
N12+00W1+50	0.0	0.0
N12+00W2+00	0.0	4.4
N12+00W2+50	0.0	0.1
N12+00W3+00	0.0	0.1
N12+00W3+50	0.0	0.0
N12+00W4+00	0.0	0.0
N12+00W4+50	0.0	0.0
N12+00W5+00	0.0	0.1
N12+00W5+50	0.0	0.0
N12+00W6+00	0.0	0.1
N12+00W6+50	0.0	0.0
N12+00W7+00	0.0	0.0
N12+00W7+50	0.0	0.0
N12+00W8+00	0.0	0.0
N12+00W8+50	0.0	0.0
N12+05W0+50	0.0	0.0
N12+50W0+00	0.0	0.0
N12+50W1+00	0.0	0.1
N12+50W1+50	0.0	0.0
N12+50W2+00	0.0	0.7
N12+50W2+50	0.0	0.3
N12+50W3+00	0.0	0.0
N12+50W3+50	0.0	0.0
N12+50W4+00	0.0	0.1
N12+50W4+50	0.0	0.1
N12+50W5+00	0.0	0.0
N12+50W5+50	0.0	0.1
N12+50W6+00	0.0	0.0
N12+50W6+50	0.0	0.0
N12+50W7+00	0.0	0.0
N12+50W7+50	0.0	0.0
N12+50W8+00	0.0	0.0
N12+50W8+50	0.0	0.0



SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N13+00W0+00	0.0	0.0
N13+00W0+50	0.0	0.0
N13+00W1+00	0.0	0.1
N13+00W1+50	0.0	0.1
N13+00W2+00	0.0	90
N13+00W2+50	0.0	0.1
N13+00W3+00	0.0	0.1
N13+00W3+50	0.0	0.0
N13+00W4+00	0.0	0.0
N13+00W4+50	0.0	0.0
N13+00W5+00	0.0	0.1
N13+00W5+50	0.0	0.1
N13+00W6+00	0.0	0.0
N13+00W6+50	0.0	0.0
N13+00W7+00	0.0	0.0
N13+00W7+50	0.0	0.0
N13+00W8+00	0.0	0.0
N13+00W8+50	0.0	0.0
N13+50W0+00	0.0	0.0
N13+50W0+50	0.0	0.0
N13+50W1+00	0.0	0.0
N13+50W1+50	0.0	0.0
N13+50W2+00	0.0	8.0
N13+50W2+50	0.0	0.0
N13+50W3+00	0.0	0.0
N13+50W3+50	0.0	0.0
N13+50W4+00	0.0	0.0
N13+50W4+50	0.0	0.0
N13+50W5+00	0.0	0.0
N13+50W5+50	0.0	0.0
N13+50W6+00	0.0	0.0
N13+50W6+50	0.0	0.0
N13+50W7+00	0.0	0.0
N13+50W7+50	0.0	0.0
N13+50W8+00	0.0	0.0
N13+50W8+50	0.0	0.0
N14+00W0+00	0.0	0.0
N14+00W0+50	0.0	0.0
N14+00W1+00	0.0	0.0
N14+00W1+50	0.0	0.0
N14+00W2+00	0.0	3.6
N14+00W2+50	0.0	0.2
N14+00W3+00	0.0	29
N14+00W3+50	0.0	1.4
N14+00W4+00	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N14+00W4+50	0.0	0.0
N14+00W5+00	0.0	0.1
N14+00W5+50	0.0	0.0
N14+00W6+00	0.0	0.0
N14+00W6+50	0.0	0.0
N14+00W7+00	0.0	0.0
N14+00W7+50	0.0	0.0
N14+00W8+00	0.0	0.0
N14+00W8+50	0.0	0.0
N14+50W0+00	0.0	0.0
N14+50W0+50	0.0	0.0
N14+50W1+00	0.0	0.0
N14+50W1+50	0.0	0.0
N14+50W2+00	0.0	2.2
N14+50W2+50	0.0	1.6
N14+50W3+00	0.0	2.6
N14+50W3+50	0.0	0.0
N14+50W4+00	0.0	0.0
N14+50W4+50	0.0	0.0
N14+50W5+00	0.0	0.0
N14+50W5+50	0.0	0.0
N14+50W6+00	0.0	0.0
N14+50W6+50	0.0	0.0
N14+50W7+00	0.0	0.0
N14+50W7+50	0.0	0.0
N14+50W8+00	0.0	0.0
N14+50W8+50	0.0	0.0
N15+00W0+00	0.0	0.0
N15+00W0+50	0.0	0.0
N15+00W1+00	0.0	0.0
N15+00W1+50	0.0	0.1
N15+00W2+00	0.0	24
N15+00W2+50	0.0	6.0
N15+00W3+00	0.0	9.6
N15+00W3+50	0.0	1.9
N15+00W4+00	0.0	0.1
N15+00W4+50	0.0	0.0
N15+00W5+00	0.0	0.0
N15+00W5+50	0.0	0.0
N15+00W6+00	0.0	0.0
N15+00W6+50	0.0	0.0
N15+00W7+00	0.0	0.0
N15+00W7+50	0.0	0.0
N15+00W8+00	0.0	0.0
N15+00W8+50	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N15+50W0+00	0.0	0.0
N15+50W0+50	0.0	0.0
N15+50W1+00	0.0	0.0
N15+50W1+50	0.0	0.0
N15+50W2+00	0.0	110
N15+50W2+50	0.0	3.0
N15+50W3+00	0.0	2.0
N15+50W3+50	0.0	43
N15+50W4+00	0.0	20.6
N15+50W4+50	0.0	0.0
N15+50W5+00	0.0	0.1
N15+50W5+50	0.0	0.0
N15+50W6+00	0.0	0.0
N15+50W6+50	0.0	0.0
N15+50W7+00	0.0	0.0
N15+50W7+50	0.0	0.0
N15+50W8+00	0.0	0.0
N15+50W8+50	0.0	0.0
N16+00W0+00	0.0	0.0
N16+00W0+50	0.0	0.0
N16+00W1+00	0.0	0.1
N16+00W1+50	0.0	0.0
N16+00W2+00	0.0	200
N16+00W2+50	0.0	0.6
N16+00W3+00	0.0	0.6
N16+00W3+50	0.0	0.8
N16+00W4+00	0.0	3.2
N16+00W4+50	0.0	0.0
N16+00W5+00	0.0	0.0
N16+00W5+50	0.0	0.0
N16+00W6+00	0.0	0.0
N16+00W6+50	0.0	0.0
N16+00W7+00	0.0	0.0
N16+00W7+50	0.0	0.0
N16+00W8+00	0.0	0.0
N16+00W8+50	0.0	0.0
N16+50W0+00	0.0	0.0
N16+50W0+50	0.0	0.0
N16+50W1+00	0.0	0.0
N16+50W1+50	0.0	0.0
N16+50W2+00	0.0	2.0
N16+50W2+50	0.0	0.0
N16+50W3+00	0.0	0.0
N16+50W3+50	0.0	0.0
N16+50W4+00	0.0	0.0

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SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
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N16+50W4+50	0.0	0.0
N16+50W5+00	0.0	0.0
N16+50W5+50	0.0	0.0
N16+50W6+00	0.0	0.0
N16+50W6+50	0.0	0.0
N16+50W7+00	0.0	0.0
N16+50W7+50	0.0	0.0
N16+50W8+00	0.0	0.0
N16+50W8+50	0.0	0.0
N17+00W0+00	0.0	0.0
N17+00W0+50	0.0	0.0
N17+00W1+00	0.0	0.0
N17+00W1+50	0.0	0.0
N17+00W2+00	0.0	4.2
N17+00W2+50	0.0	1.0
N17+00W3+00	0.0	1.6
N17+00W3+50	0.0	0.0
N17+00W4+00	0.0	0.0
N17+00W4+50	0.0	0.0
N17+00W5+00	0.0	0.0
N17+00W5+50	0.0	0.0
N17+00W6+00	0.0	0.0
N17+00W6+50	0.0	0.0
N17+00W7+00	0.0	0.1
N17+00W7+50	0.0	0.0
N17+00W8+00	0.0	0.0
N17+00W8+50	0.0	0.0
N17+50W0+00	0.0	0.0
N17+50W0+50	0.0	0.0
N17+50W1+00	0.0	0.0
N17+50W1+50	0.0	0.0
N17+50W2+00	0.0	0.1
N17+50W2+50	0.0	0.0
N17+50W3+00	0.0	0.0
N17+50W3+50	0.0	4.0
N17+50W4+00	0.0	2.0
N17+50W4+50	0.0	0.0
N17+50W5+00	0.0	0.0
N17+50W5+50	0.0	0.0
N17+50W6+00	0.0	0.0
N17+50W6+50	0.0	NA
N17+50W7+00	0.0	NA
N17+50W7+50	0.0	0.0
N17+50W8+00	0.0	0.0
N17+50W8+50	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N18+00W0+00	0.0	0.0
N18+00W0+50	0.0	0.0
N18+00W1+00	0.0	0.0
N18+00W1+50	0.0	0.0
N18+00W2+00	0.0	0.2
N18+00W2+50	0.0	0.0
N18+00W3+00	0.0	0.0
N18+00W3+50	0.0	0.0
N18+00W4+00	0.0	0.2
N18+00W4+50	0.0	0.0
N18+00W5+00	0.0	0.0
N18+00W5+50	0.0	0.0
N18+00W6+00	0.0	0.0
N18+00W6+50	0.0	NA
N18+00W7+00	0.0	0.0
N18+00W7+50	0.0	0.0
N18+00W8+00	0.0	0.0
N18+00W8+50	0.0	0.0
N18+50W0+00	0.0	0.0
N18+50W0+50	0.0	0.0
N18+50W1+00	0.0	0.0
N18+50W1+50	0.0	0.1
N18+50W2+00	0.0	0.4
N18+50W2+50	0.0	0.0
N18+50W3+00	0.0	0.0
N18+50W3+50	0.0	0.0
N18+50W4+00	0.0	0.1
N18+50W4+50	0.0	0.0
N18+50W5+00	0.0	0.0
N18+50W5+50	0.0	0.0
N18+50W6+00	0.0	0.0
N18+50W6+50	0.0	NA
N18+50W7+00	0.0	NA
N18+50W7+50	0.0	0.0
N18+50W8+00	0.0	0.0
N18+50W8+50	0.0	0.0
N19+00W0+00	0.0	0.0
N19+00W0+50	0.0	0.0
N19+00W1+00	0.0	0.0
N19+00W1+50	0.0	0.1
N19+00W2+00	0.0	0.4
N19+00W2+50	0.0	1.8
N19+00W3+00	0.0	0.0
N19+00W3+50	0.0	0.0
N19+00W4+00	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N19+00W4+50	0.0	0.0
N19+00W5+00	0.0	0.1
N19+00W5+50	0.0	0.0
N19+00W6+00	0.0	0.0
N19+00W6+50	0.0	NA
N19+00W7+00	0.0	NA
N19+00W7+50	0.0	NA
N19+00W8+00	0.0	NA
N19+00W8+50	0.0	0.0
N19+50W0+00	0.0	0.0
N19+50W0+50	0.0	0.0
N19+50W1+00	0.0	0.0
N19+50W1+50	0.0	0.0
N19+50W2+00	0.0	0.0
N19+50W2+50	0.0	0.5
N19+50W3+00	0.0	0.0
N19+50W3+50	0.0	0.0
N19+50W4+00	0.0	0.0
N19+50W4+50	0.0	0.0
N19+50W5+00	0.0	0.0
N19+50W5+50	0.0	0.0
N19+50W6+00	0.0	0.0
N19+50W6+50	0.0	NA
N19+50W7+00	0.0	NA
N19+50W7+50	0.0	NA
N19+50W8+00	0.0	NA
N19+50W8+50	0.0	0.0
N2+00W0+00	0.0	0.3
N2+00W0+50	0.0	0.4
N2+00W1+00	0.0	0.4
N2+00W1+50	0.0	0.5
N2+00W2+00	0.0	1.0
N2+00W2+50	0.0	0.5
N2+00W3+00	0.0	0.4
N2+00W3+50	0.0	0.4
N2+00W4+00	0.0	0.4
N2+00W4+50	0.0	0.4
N2+00W5+00	0.0	0.4
N2+00W5+50	0.0	0.4
N2+00W6+00	0.0	0.3
N2+00W6+50	0.0	0.2
N2+00W7+00	0.0	0.2
N2+00W7+50	0.0	0.2
N2+00W8+00	0.0	0.2
N2+00W8+50	0.0	0.1

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N2+50W0+00	0.0	0.0
N2+50W0+50	0.0	0.1
N2+50W1+00	0.0	0.0
N2+50W1+50	0.0	0.0
N2+50W2+00	0.0	9.0
N2+50W2+50	0.0	0.1
N2+50W3+00	0.0	0.0
N2+50W3+50	0.0	0.0
N2+50W4+00	0.0	0.0
N2+50W4+50	0.0	0.0
N2+50W5+00	0.0	0.0
N2+50W5+50	0.0	0.0
N2+50W6+00	0.0	0.0
N2+50W6+50	0.0	0.0
N2+50W7+00	0.0	0.0
N2+50W7+50	0.0	0.0
N2+50W8+00	0.0	0.1
N2+50W8+50	0.0	0.0
N20+00W0+00	0.0	0.0
N20+00W0+50	0.0	0.0
N20+00W1+00	0.0	0.0
N20+00W1+50	0.0	0.0
N20+00W2+00	0.0	0.0
N20+00W2+50	0.0	0.0
N20+00W3+00	0.0	0.0
N20+00W3+50	0.0	0.0
N20+00W4+00	0.0	0.0
N20+00W4+50	0.0	0.0
N20+00W5+00	0.0	0.0
N20+00W5+50	0.0	0.0
N20+00W6+00	0.0	0.0
N20+00W6+50	0.0	NA
N20+00W7+00	0.0	NA
N20+00W7+50	0.0	NA
N20+00W8+00	0.0	NA
N20+00W8+50	0.0	NA
N20+50W0+00	0.0	0.0
N20+50W0+50	0.0	0.0
N20+50W1+00	0.0	0.0
N20+50W1+50	0.0	0.0
N20+50W2+00	0.0	0.0
N20+50W2+50	0.0	0.0
N20+50W3+00	0.0	0.0
N20+50W3+50	0.0	0.0
N20+50W4+00	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N20+50W4+50	0.0	0.0
N20+50W5+00	0.0	0.0
N20+50W5+50	0.0	0.0
N20+50W6+00	0.0	0.0
N20+50W6+50	0.0	0.0
N20+50W7+00	0.0	0.1
N20+50W7+50	0.0	NA
N20+50W8+00	0.0	NA
N20+50W8+50	0.0	NA
N21+00W0+00	0.0	0.0
N21+00W0+50	0.0	0.0
N21+00W1+00	0.0	0.0
N21+00W1+50	0.0	0.0
N21+00W2+00	0.0	0.0
N21+00W2+50	0.0	0.0
N21+00W3+00	0.0	0.0
N21+00W3+50	0.0	0.0
N21+00W4+00	0.0	0.0
N21+00W4+50	0.0	0.0
N21+00W5+00	0.0	0.0
N21+00W5+50	0.0	0.0
N21+00W6+00	0.0	0.0
N21+00W6+50	0.0	0.0
N21+00W7+00	0.0	0.0
N21+00W7+50	0.0	0.0
N21+00W8+00	0.0	0.0
N21+00W8+50	0.0	0.0
N3+00W0+00	0.0	0.0
N3+00W0+50	0.0	0.0
N3+00W1+00	0.0	0.1
N3+00W1+50	0.0	0.0
N3+00W2+00	0.0	22
N3+00W2+50	0.0	0.0
N3+00W3+00	0.0	0.0
N3+00W3+50	0.0	0.1
N3+00W4+00	0.0	0.4
N3+00W4+50	0.0	0.1
N3+00W5+00	0.0	0.1
N3+00W5+50	0.0	0.1
N3+00W6+00	0.0	0.0
N3+00W6+50	0.0	0.1
N3+00W7+00	0.0	0.0
N3+00W7+50	0.0	0.0
N3+00W8+00	0.0	0.0
N3+00W8+50	0.0	0.1



SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N3+50W0+00	0.0	0.0
N3+50W0+50	0.0	0.0
N3+50W1+00	0.0	0.0
N3+50W1+50	0.0	0.0
N3+50W2+00	0.0	70
N3+50W2+50	0.0	0.0
N3+50W3+00	0.0	0.1
N3+50W3+50	0.0	0.0
N3+50W4+00	0.0	0.1
N3+50W4+50	0.0	0.1
N3+50W5+00	0.0	0.1
N3+50W5+50	0.0	0.1
N3+50W6+00	0.0	0.0
N3+50W6+50	0.0	0.0
N3+50W7+00	0.0	0.1
N3+50W7+50	0.0	0.2
N3+50W8+00	0.0	0.1
N3+50W8+50	0.0	0.1
N4+00W0+00	0.0	0.0
N4+00W0+50	0.0	0.0
N4+00W1+00	0.0	0.0
N4+00W1+50	0.0	0.0
N4+00W2+00	0.0	5.2
N4+00W2+50	0.0	0.2
N4+00W3+00	0.0	0.2
N4+00W3+50	0.0	0.2
N4+00W4+00	0.0	0.2
N4+00W4+50	0.0	0.2
N4+00W5+00	0.0	0.0
N4+00W5+50	0.0	0.0
N4+00W6+00	0.0	0.0
N4+00W6+50	0.0	0.0
N4+00W7+00	0.0	0.0
N4+00W7+50	0.0	0.0
N4+00W8+00	0.0	0.0
N4+00W8+50	0.0	0.0
N4+50W0+00	0.0	0.0
N4+50W0+50	0.0	0.1
N4+50W1+00	0.0	0.2
N4+50W1+50	0.0	0.3
N4+50W2+00	0.0	0.8
N4+50W2+50	0.0	0.1
N4+50W3+00	0.0	0.0
N4+50W3+50	0.0	0.0
N4+50W4+00	0.0	0.0

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SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N4+50W4+50	0.0	0.0
N4+50W5+00	0.0	0.1
N4+50W5+50	0.0	0.0
N4+50W6+00	0.0	0.0
N4+50W6+50	0.0	0.0
N4+50W7+00	0.0	0.0
N4+50W7+50	0.0	0.0
N4+50W8+00	0.0	0.0
N4+50W8+50	0.0	0.0
N5+00W0+00	0.0	0.0
N5+00W0+50	0.0	0.1
N5+00W1+00	0.0	0.1
N5+00W1+50	0.0	0.1
N5+00W2+00	0.0	60
N5+00W2+50	0.0	0.0
N5+00W3+00	0.0	0.0
N5+00W3+50	0.0	0.1
N5+00W4+00	0.0	0.1
N5+00W4+50	0.0	0.0
N5+00W5+00	0.0	0.1
N5+00W5+50	0.0	0.1
N5+00W6+00	0.0	0.1
N5+00W6+50	0.0	0.1
N5+00W7+00	0.0	0.0
N5+00W7+50	0.0	0.0
N5+00W8+00	0.0	0.0
N5+00W8+50	0.0	0.0
N5+50W0+00	0.0	0.0
N5+50W0+50	0.0	0.0
N5+50W1+00	0.0	0.0
N5+50W1+50	0.0	0.1
N5+50W2+00	0.0	1.0
N5+50W2+50	0.0	0.0
N5+50W3+00	0.0	0.0
N5+50W3+50	0.0	0.0
N5+50W4+00	0.0	0.0
N5+50W4+50	0.0	0.0
N5+50W5+00	0.0	0.0
N5+50W5+50	0.0	0.0
N5+50W6+00	0.0	0.0
N5+50W6+50	0.0	0.2
N5+50W7+00	0.0	0.1
N5+50W7+50	0.0	0.1
N5+50W8+00	0.0	0.0
N5+50W8+50	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N6+00W0+00	0.0	0.0
N6+00W0+50	0.0	0.0
N6+00W1+00	0.0	0.0
N6+00W1+50	0.0	0.0
N6+00W2+00	0.0	6.0
N6+00W2+50	0.0	0.0
N6+00W3+00	0.0	0.0
N6+00W3+50	0.0	0.0
N6+00W4+00	0.0	0.0
N6+00W4+50	0.0	0.0
N6+00W5+00	0.0	0.0
N6+00W5+50	0.0	0.0
N6+00W6+00	0.0	0.0
N6+00W6+50	0.0	0.0
N6+00W7+00	0.0	0.1
N6+00W7+50	0.0	0.0
N6+00W8+00	0.0	0.1
N6+00W8+50	0.0	0.0
N6+50W0+00	0.0	0.0
N6+50W0+50	0.0	0.0
N6+50W1+00	0.0	0.0
N6+50W1+50	0.0	0.0
N6+50W2+00	0.0	8.6
N6+50W2+50	0.0	0.0
N6+50W3+00	0.0	0.1
N6+50W3+50	0.0	0.0
N6+50W4+00	0.0	0.0
N6+50W4+50	0.0	0.1
N6+50W5+00	0.0	0.0
N6+50W5+50	0.0	0.0
N6+50W6+00	0.0	0.0
N6+50W6+50	0.0	0.0
N6+50W7+00	0.0	0.0
N6+50W7+50	0.0	0.0
N6+50W8+00	0.0	0.0
N6+50W8+50	0.0	0.0
N7+00W0+00	0.0	0.0
N7+00W0+50	0.0	0.0
N7+00W1+00	0.0	0.0
N7+00W1+50	0.0	0.1
N7+00W2+00	0.0	9.6
N7+00W2+50	0.0	0.9
N7+00W3+00	0.0	0.0
N7+00W3+50	0.0	0.0
N7+00W4+00	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N7+00W4+50	0.0	0.0
N7+00W5+00	0.0	0.0
N7+00W5+50	0.0	0.0
N7+00W6+00	0.0	0.0
N7+00W6+50	0.0	0.0
N7+00W7+00	0.0	0.0
N7+00W7+50	0.0	0.0
N7+00W8+00	0.0	0.0
N7+00W8+50	0.0	0.0
N7+50W0+00	0.0	0.0
N7+50W0+50	0.0	0.0
N7+50W1+00	0.0	0.0
N7+50W1+50	0.0	0.2
N7+50W2+00	0.0	3.8
N7+50W2+50	0.0	0.1
N7+50W3+00	0.0	0.0
N7+50W3+50	0.0	0.1
N7+50W4+00	0.0	0.0
N7+50W4+50	0.0	0.0
N7+50W5+00	0.0	0.1
N7+50W5+50	0.0	0.0
N7+50W6+00	0.0	0.0
N7+50W6+50	0.0	0.1
N7+50W7+00	0.0	0.0
N7+50W7+50	0.0	0.0
N7+50W8+00	0.0	0.0
N7+50W8+50	0.0	0.0
N8+00W0+00	0.0	0.0
N8+00W0+50	0.0	0.0
N8+00W1+00	0.0	0.0
N8+00W1+50	0.0	34
N8+00W2+00	0.0	0.8
N8+00W2+50	0.0	0.0
N8+00W3+00	0.0	0.0
N8+00W3+50	0.0	0.0
N8+00W4+00	0.0	0.0
N8+00W4+50	0.0	0.0
N8+00W5+00	0.0	0.0
N8+00W5+50	0.0	0.0
N8+00W6+00	0.0	0.0
N8+00W6+50	0.0	0.0
N8+00W7+00	0.0	0.0
N8+00W7+50	0.0	0.0
N8+00W8+00	0.0	0.0
N8+00W8+50	0.0	0.0

SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N8+50W0+00	0.0	0.0
N8+50W0+50	0.0	0.0
N8+50W1+00	0.0	0.0
N8+50W1+50	0.0	3.1
N8+50W2+00	0.0	3.4
N8+50W2+50	0.0	0.6
N8+50W3+00	0.0	0.0
N8+50W3+50	0.0	0.0
N8+50W4+00	0.0	0.0
N8+50W4+50	0.0	0.1
N8+50W5+00	0.0	0.0
N8+50W5+50	0.0	0.0
N8+50W6+00	0.0	0.0
N8+50W6+50	0.0	0.0
N8+50W7+00	0.0	0.0
N8+50W7+50	0.0	0.0
N8+50W8+00	0.0	0.0
N8+50W8+50	0.0	0.0
N9+00W0+00	0.0	0.0
N9+00W0+50	0.0	0.0
N9+00W1+00	0.0	0.0
N9+00W1+50	0.0	50
N9+00W2+00	0.0	1.0
N9+00W2+50	0.0	0.0
N9+00W3+00	0.0	0.0
N9+00W3+50	0.0	0.0
N9+00W4+00	0.0	0.0
N9+00W4+50	0.0	0.0
N9+00W5+00	0.0	0.0
N9+00W5+50	0.0	0.0
N9+00W6+00	0.0	0.0
N9+00W6+50	0.0	0.0
N9+00W7+00	0.0	0.0
N9+00W7+50	0.0	0.0
N9+00W8+00	0.0	0.0
N9+00W8+50	0.0	0.0
N9+50W0+00	0.0	0.0
N9+50W0+50	0.0	0.0
N9+50W1+00	0.0	0.0
N9+50W1+50	0.0	0.6
N9+50W2+00	0.0	25
N9+50W2+50	0.0	1.5
N9+50W3+00	0.0	0.0
N9+50W3+50	0.0	0.0
N9+50W4+00	0.0	0.0

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SITE 3 SURFACE EMISSIONS SURVEY

COORDINATE LOCATION	OVA BACKGROUND (ppm)	OVA ABOVE BACKGROUND (ppm)
N9+50W4+50	0.0	0.1
N9+50W5+00	0.0	0.0
N9+50W5+50	0.0	0.0
N9+50W6+00	0.0	0.0
N9+50W6+50	0.0	0.1
N9+50W7+00	0.0	0.0
N9+50W7+50	0.0	0.0
N9+50W8+00	0.0	0.0
N9+50W8+50	0.0	0.0

Key:

NA = Not Accessible.

APPENDIX C  
PARTICULATE AIR SCREENING DATA

SITE 3

PARTICULATE AIR SCREENING DATA

Date: June 6, 1991

Wind Direction: East

Wind Velocity: 5 to 8 miles per hour

Upwind Location: Upwind location 1, geophysical survey grid point  
N15+00, W0+00.

Measurement Duration: 5 minutes

Time Weighted Average Particulate Concentration:  $0.00 \text{ mg/m}^3$

Downwind Location: Downwind location 1, geophysical survey grid point,  
N15+00, W5+50.

Measurement Duration: 5 minutes

Time Weighted Average Particulate Concentration:  $0.01 \text{ mg/m}^3$

Upwind/Downwind Difference:  $0.01 \text{ mg/m}^3$



SITE 3

PARTICULATE AIR SCREENING DATA

Date: June 6, 1991

Wind Direction: East

Wind Velocity: 5 to 8 miles per hour

Upwind Location: Upwind location 2, geophysical survey grid point,  
N5+00, W0+00.

Measurement Duration: 5 minutes

Time Weighted Average Particulate Concentration:  $0.01 \text{ mg/m}^3$

Downwind Location: Downwind location 2, geophysical survey grid point,  
N5+00, W6+50.

Measurement Duration: 5 minutes

Time Weighted Average Particulate Concentration:  $0.00 \text{ mg/m}^3$

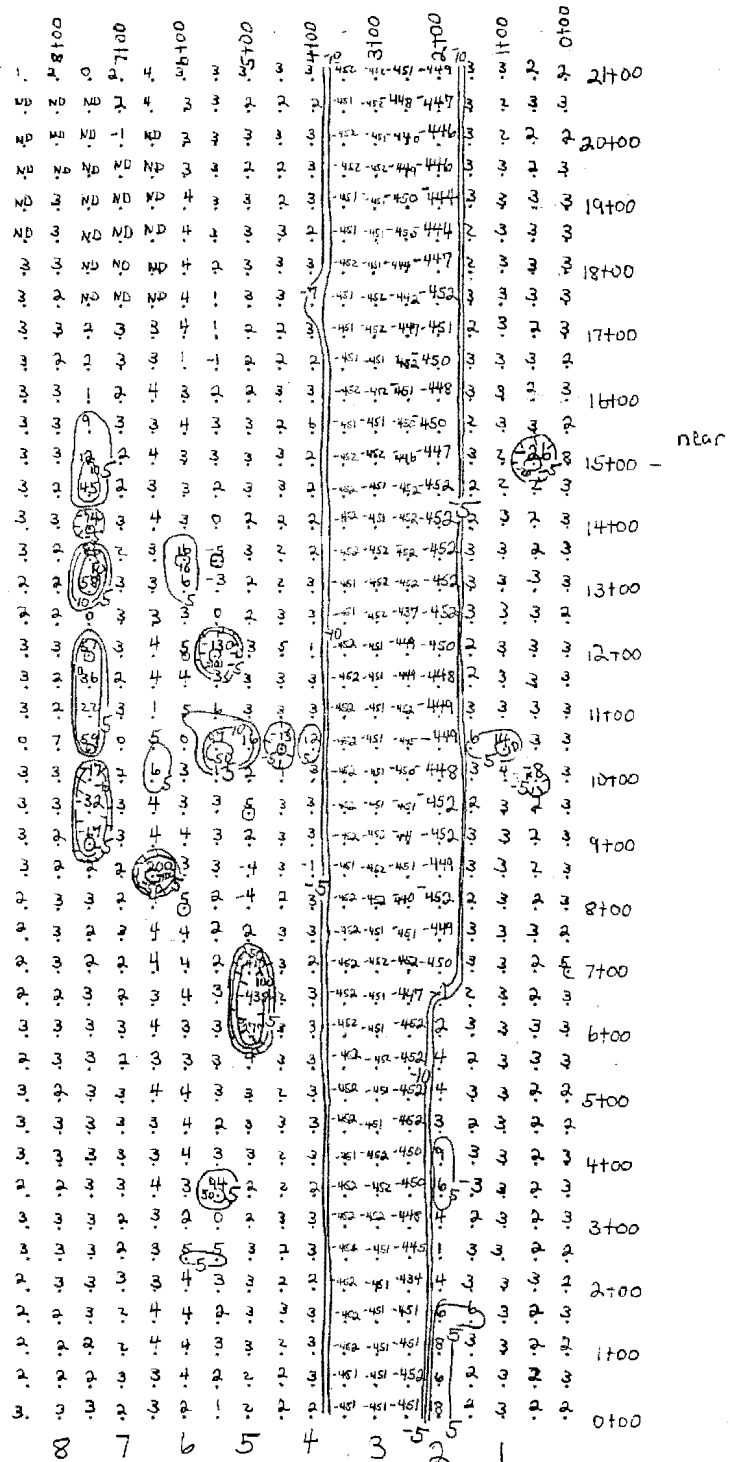
Upwind/Downwind Difference:  $0.01 \text{ mg/m}^3$

APPENDIX D  
MAGNETOMETER AND EM-31 DATA



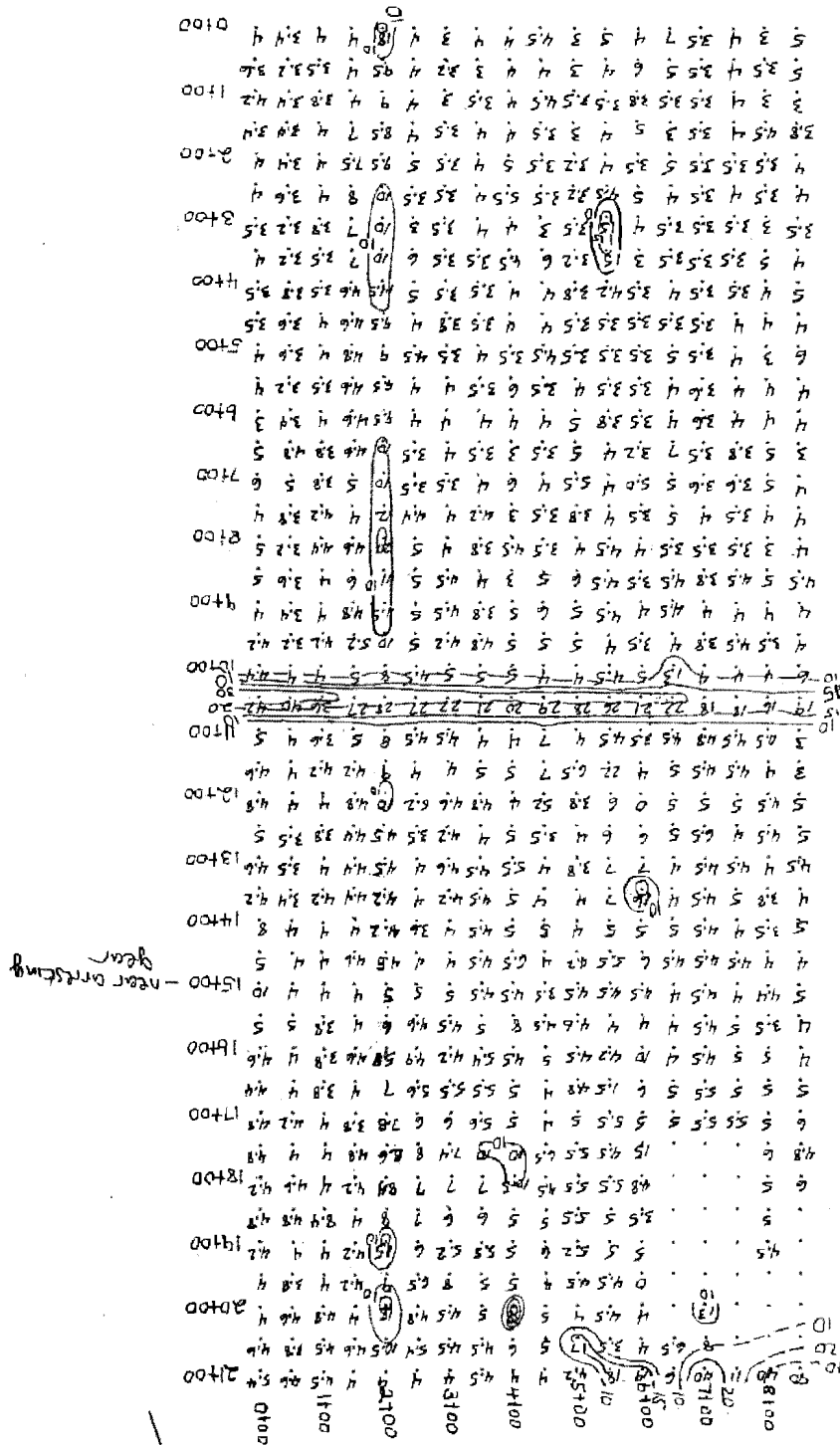
$$\text{plotted values} = \left[ 500 - \left( \frac{\text{actual reading in gauss}}{100} \right) \right]$$

ND = no data (measurement not made because of standing water in area and lack of access)



0 100 200 ft

no data for holes without numerical values



Contours at 10, 15, 20, 40 mhos/m

Horizontal (3M exploration depth)

E-W orientation

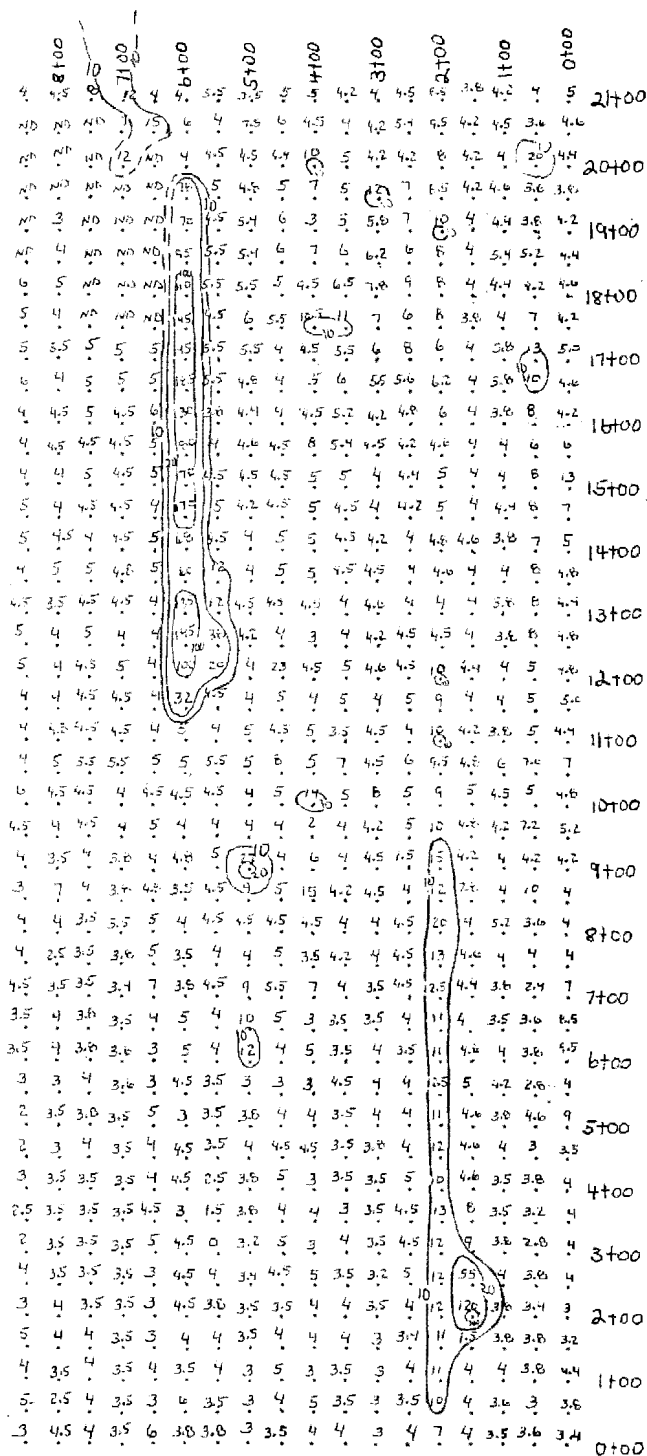
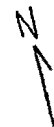
EM-31 (mhos/m)

Site 3

# Site 3 Geophysical Survey [EM31] Results (mmhos/m)

N-S ORIENTATION, HORIZONTAL CURRENT [3m EXPLORATION DEPTH]

Contours at 10, 20, 100 mmhos/m



0 100 200 ft

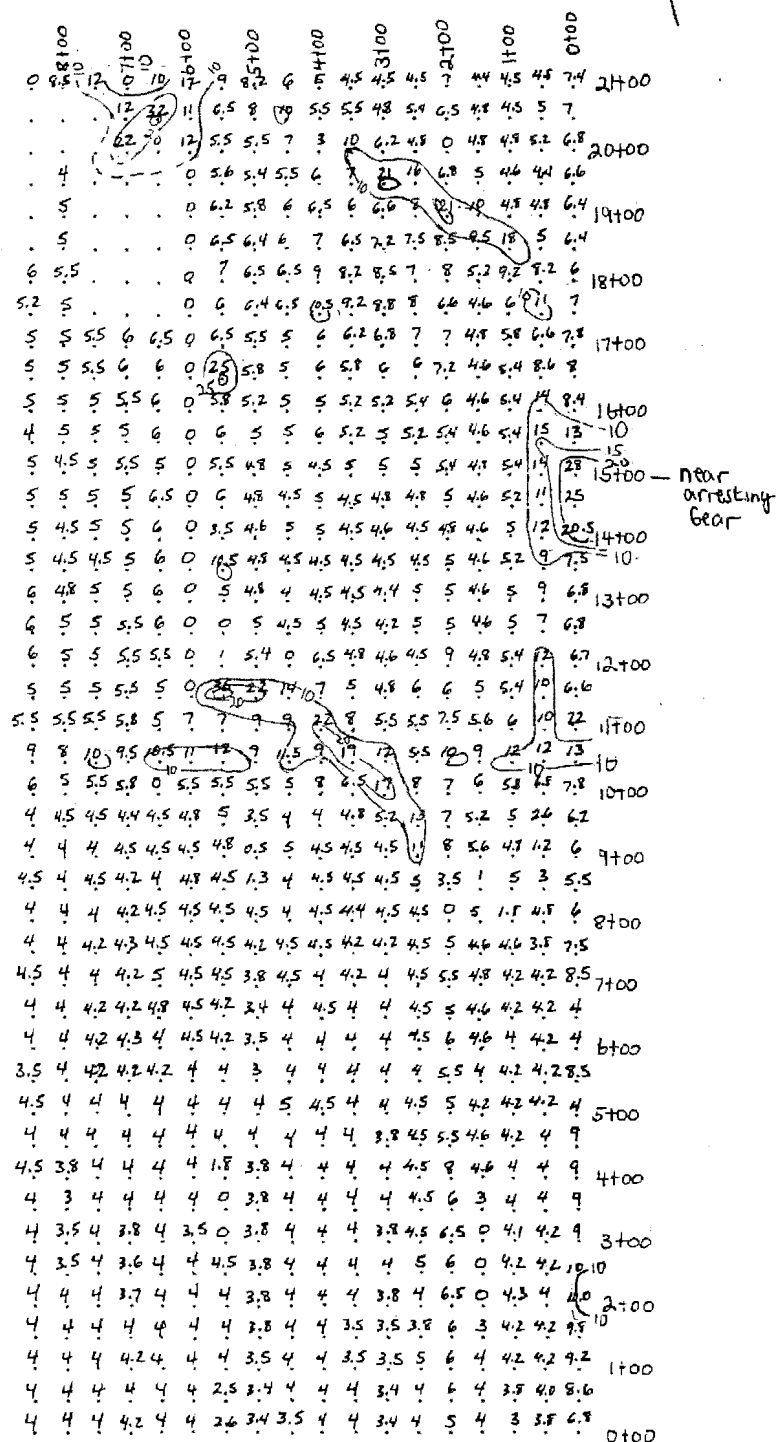
ND - no data

E - W orientation

Vertical Dipoles (6m exploration depth)

Contours at 10, 15, 20, 30 mmhos/m

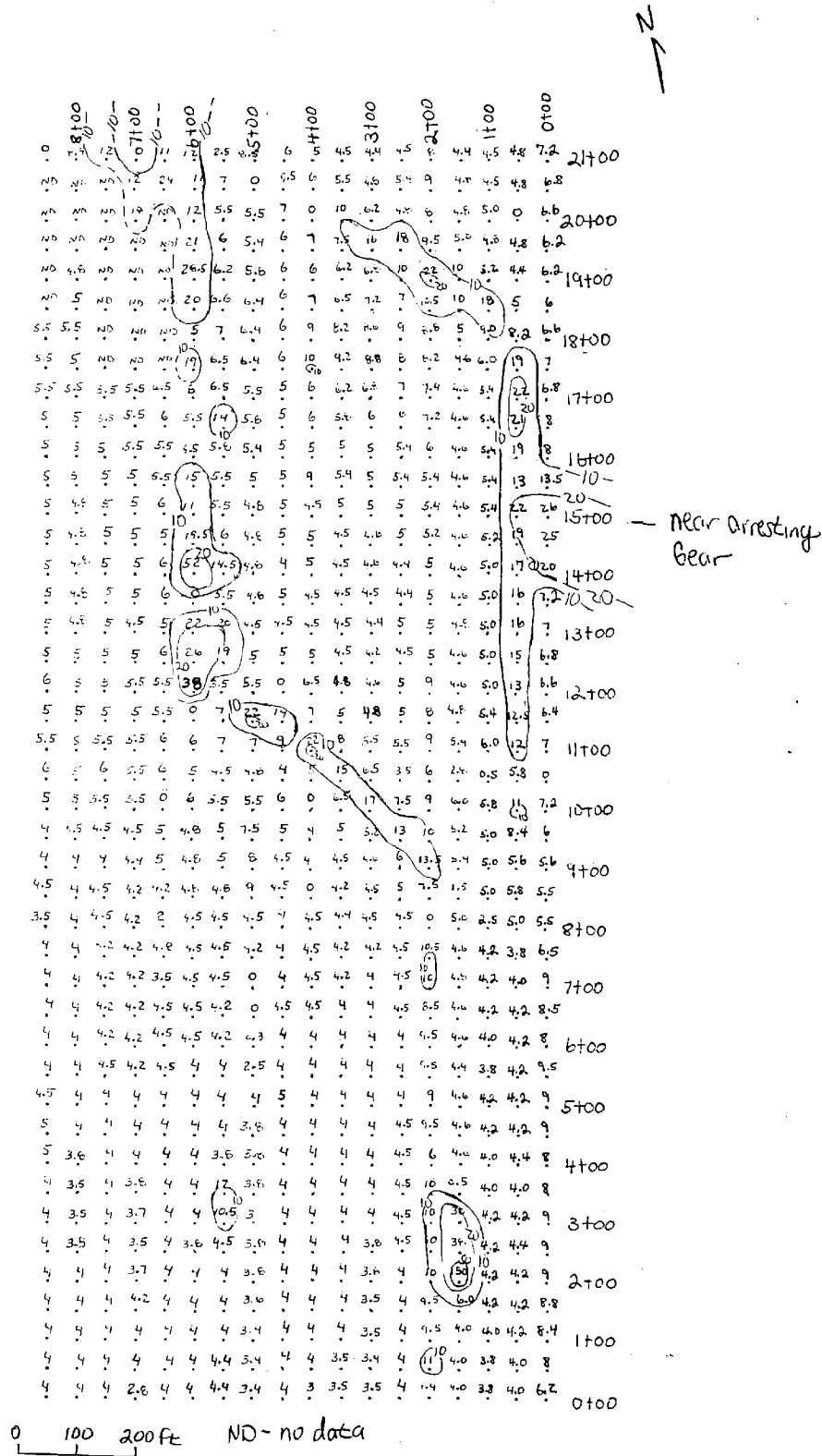
Site 3



no data for nodes without numeric values

0      100      200 ft

Site 3 Geophysical Survey [EM-31] Results mhos/m  
 N-S orientation, Vertical Coplanar [6m exploration depth]  
 Contours at 10, 20 mmhos/m



SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N0+00W0+00	6.2	6.8	3.4	4.0	50237
N0+00W0+50	4.0	3.8	3.6	3.4	50263
N0+00W1+00	3.8	3.0	3.5	4.0	50333
N0+00W1+50	4.0	4.0	4.0	4.0	50294
N0+00W2+00	1.4	5.0	7.0	18.0	51834
N0+00W2+50	4.0	4.0	4.0	4.0	4805
N0+00W3+00	3.5	3.4	3.0	3.0	4897
N0+00W3+50	3.5	4.0	4.0	4.0	4804
N0+00W4+00	3.0	4.0	4.0	4.0	50223
N0+00W4+50	4.0	3.5	3.5	4.5	50248
N0+00W5+00	3.4	3.4	3.0	3.0	50274
N0+00W5+50	4.4	2.6	3.8	5.0	50102
N0+00W6+00	4.0	4.0	3.8	4.0	50263
N0+00W6+50	4.0	4.0	6.0	7.0	50325
N0+00W7+00	2.8	4.2	3.5	3.5	50264
N0+00W7+50	4.0	4.0	4.0	4.0	50315
N0+00W8+00	4.0	4.0	4.5	3.0	50353
N0+00W8+50	4.0	4.0	3.0	5.0	50333
N0+50W0+00	8.0	8.6	3.8	3.6	50302
N0+50W0+50	4.0	4.0	3.0	3.2	50251
N0+50W1+00	3.8	3.8	3.6	3.5	50330
N0+50W1+50	4.0	4.0	4.0	4.0	50288
N0+50W2+00	11.0	6.0	10.0	9.5	50634
N0+50W2+50	4.0	4.0	3.5	4.0	4794
N0+50W3+00	3.4	3.4	3.0	3.2	4806
N0+50W3+50	3.5	4.0	3.5	3.0	4797
N0+50W4+00	4.0	4.0	5.0	4.0	50330
N0+50W4+50	4.0	4.0	4.0	4.0	50279
N0+50W5+00	3.4	3.4	3.0	3.0	50297
N0+50W5+50	4.4	2.5	3.5	4.0	50298
N0+50W6+00	4.0	4.0	6.0	6.0	50453
N0+50W6+50	4.0	4.0	3.0	5.0	50346
N0+50W7+00	4.0	4.0	3.5	3.5	50393
N0+50W7+50	4.0	4.0	4.0	4.0	50261
N0+50W8+00	4.0	4.0	2.5	3.5	50225
N0+50W8+50	4.0	4.0	5.0	5.0	50268
N1+00W0+00	8.4	9.2	4.4	4.2	50291
N1+00W0+50	4.2	4.2	3.8	3.4	50207
N1+00W1+00	4.0	4.2	4.0	3.8	50321
N1+00W1+50	4.0	4.0	4.0	4.0	50352
N1+00W2+00	9.5	6.0	11.0	9.0	50816
N1+00W2+50	4.0	5.0	4.0	4.0	4864
N1+00W3+00	3.5	3.5	3.0	3.0	4808
N1+00W3+50	4.0	3.5	3.5	3.5	4795
N1+00W4+00	4.0	4.0	3.0	4.0	50318



SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N1+00W4+50	4.0	4.0	5.0	4.5	50260
N1+00W5+00	3.4	3.5	3.0	3.5	50366
N1+00W5+50	4.0	4.0	4.0	3.5	50317
N1+00W6+00	4.0	4.0	3.5	3.8	50437
N1+00W6+50	4.0	4.0	4.0	3.5	50448
N1+00W7+00	4.0	4.2	3.5	3.5	50229
N1+00W7+50	4.0	4.0	4.0	4.0	50290
N1+00W8+00	4.0	4.0	3.5	3.0	50270
N1+00W8+50	4.0	4.0	4.0	3.0	50246
N1+50W0+00	8.8	9.8	3.2	3.4	50305
N1+50W0+50	4.2	4.2	3.8	3.4	50244
N1+50W1+00	4.2	4.2	3.8	4.0	50333
N1+50W1+50	6.0	3.0	1.5	7.0	50652
N1+50W2+00	9.5	6.0	11.0	8.5	50612
N1+50W2+50	4.0	3.8	3.4	4.0	4884
N1+50W3+00	3.5	3.5	3.0	3.5	4820
N1+50W3+50	4.0	3.5	4.0	4.0	4794
N1+50W4+00	4.0	4.0	4.0	4.0	50323
N1+50W4+50	4.0	4.0	4.0	3.5	50334
N1+50W5+00	3.6	3.8	3.5	3.0	50389
N1+50W5+50	4.0	4.0	4.0	4.0	50299
N1+50W6+00	4.0	4.0	4.0	5.0	50486
N1+50W6+50	4.0	4.0	3.0	3.0	50477
N1+50W7+00	4.2	4.0	3.5	3.5	50275
N1+50W7+50	4.0	4.0	4.0	4.0	50331
N1+50W8+00	4.0	4.0	4.0	4.5	50268
N1+50W8+50	4.0	4.0	5.0	3.8	50291
N10+00W0+00	7.2	7.8	4.8	4.4	50348
N10+00W0+50	11.0	6.8	5.0	4.0	50211
N10+00W1+00	5.8	5.8	4.5	4.0	50401
N10+00W1+50	6.0	6.0	5.0	5.0	50332
N10+00W2+00	9.0	7.0	9.0	8.0	5187
N10+00W2+50	7.5	8.0	5.0	4.5	4949
N10+00W3+00	17.0	17.0	8.0	5.0	4806
N10+00W3+50	6.5	6.5	5.0	5.0	4795
N10+00W4+00	0.0	8.0	14.0	5.0	50347
N10+00W4+50	6.0	5.0	5.0	4.0	50197
N10+00W5+00	5.5	5.5	4.0	4.0	50293
N10+00W5+50	5.5	5.5	4.5	4.5	50182
N10+00W6+00	6.0	5.5	4.5	5.0	50305
N10+00W6+50	0.0	0.0	9.5	13.0	50688
N10+00W7+00	5.5	5.8	4.0	4.0	50280
N10+00W7+50	5.5	5.5	4.5	4.0	48238
N10+00W8+00	5.0	5.0	4.5	4.0	50346
N10+00W8+50	5.0	6.0	6.0	6.0	50353

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N10+50W0+00	0.0	13.0	7.0	42.0	50456
N10+50W0+50	5.8	12.0	7.6	40.0	49280
N10+50W1+00	0.5	12.0	6.0	36.0	51443
N10+50W1+50	2.8	9.0	4.8	27.0	50633
N10+50W2+00	6.0	10.0	9.5	28.0	4758
N10+50W2+50	3.5	5.5	6.0	27.0	5430
N10+50W3+00	6.5	12.0	4.5	22.0	4804
N10+50W3+50	15.0	19.0	7.0	21.0	4796
N10+50W4+00	5.0	9.0	5.0	20.0	51287
N10+50W4+50	4.0	11.5	8.0	29.0	48634
N10+50W5+00	4.8	9.0	5.0	28.0	51635
N10+50W5+50	4.5	12.0	5.5	26.0	59774
N10+50W6+00	5.0	11.0	5.0	21.0	50084
N10+50W6+50	6.0	10.5	5.0	22.0	50549
N10+50W7+00	5.5	9.5	5.5	18.0	50014
N10+50W7+50	6.0	10.0	5.5	18.0	55967
N10+50W8+00	5.0	8.0	5.0	16.0	50784
N10+50W8+50	6.0	9.0	4.0	19.0	49926
N11+00W0+00	7.0	72.0	4.4	5.0	50321
N11+00W0+50	12.0	10.0	5.0	4.0	50360
N11+00W1+00	6.0	6.0	3.8	3.6	50337
N11+00W1+50	5.4	5.6	4.2	5.0	50308
N11+00W2+00	9.0	7.5	10.0	8.0	4765
N11+00W2+50	5.5	5.5	4.0	4.5	4780
N11+00W3+00	5.5	5.5	4.5	4.5	4802
N11+00W3+50	8.0	8.0	3.5	4.0	4795
N11+00W4+00	22.0	22.0	5.0	4.0	50333
N11+00W4+50	9.0	9.0	4.5	7.0	50338
N11+00W5+00	7.0	9.0	5.0	4.0	50326
N11+00W5+50	7.0	7.0	4.0	4.5	50610
N11+00W6+00	6.0	7.0	5.0	3.5	50515
N11+00W6+50	6.0	5.0	4.0	4.5	50120
N11+00W7+00	5.5	5.8	4.5	4.8	50301
N11+00W7+50	5.5	5.5	4.5	4.5	52294
N11+00W8+00	5.0	5.5	4.8	4.5	50288
N11+00W8+50	5.5	5.5	4.0	3.0	50321
N11+50W0+00	6.4	6.6	5.0	4.6	50321
N11+50W0+50	12.5	10.0	5.0	4.0	50330
N11+50W1+00	5.4	5.4	4.0	4.2	50352
N11+50W1+50	4.8	5.0	4.0	4.2	50282
N11+50W2+00	8.0	6.0	9.0	9.0	5102
N11+50W2+50	5.0	6.0	5.0	4.0	5052
N11+50W3+00	4.8	4.8	4.0	4.0	4810
N11+50W3+50	5.0	5.0	5.0	5.0	4791
N11+50W4+00	7.0	7.0	4.0	5.0	50335

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N11+50W4+50	14.0	14.0	5.0	7.0	50340
N11+50W5+00	22.0	22.0	4.0	6.5	50371
N11+50W5+50	7.0	35.0	4.5	22.0	50383
N11+50W6+00	0.0	0.0	32.0	4.0	50404
N11+50W6+50	5.5	5.0	4.0	5.0	50423
N11+50W7+00	5.0	5.5	4.5	4.5	50297
N11+50W7+50	5.0	5.0	4.5	4.5	53636
N11+50W8+00	5.0	5.0	4.0	4.0	50295
N11+50W8+50	5.0	5.0	4.0	3.0	50332
N12+00W0+00	6.6	6.7	4.8	4.8	50319
N12+00W0+50	13.0	12.0	5.0	4.0	50315
N12+00W1+00	5.0	5.4	4.0	4.0	50308
N12+00W1+50	4.6	4.8	4.4	4.8	50296
N12+00W2+00	9.0	9.0	10.0	10.0	4912
N12+00W2+50	5.0	4.5	4.5	5.2	5091
N12+00W3+00	4.6	4.6	4.6	4.6	4805
N12+00W3+50	4.8	4.8	5.0	4.8	4792
N12+00W4+00	6.5	6.5	4.5	4.0	50186
N12+00W4+50	0.0	0.0	23.0	52.0	50537
N12+00W5+00	5.5	5.4	4.0	3.8	50308
N12+00W5+50	3.5	1.0	20.0	6.0	36939
N12+00W6+00	38.0	0.0	100.0	0.0	50542
N12+00W6+50	5.5	5.5	4.0	5.0	50400
N12+00W7+00	5.5	5.5	5.0	5.0	50322
N12+00W7+50	5.0	5.0	4.5	5.0	55782
N12+00W8+00	5.0	5.0	4.0	4.5	50310
N12+00W8+50	6.0	6.0	5.0	5.0	50317
N12+05W0+50	15.0	7.0	8.0	3.5	50321
N12+50W0+00	6.8	6.8	4.8	5.0	50276
N12+50W1+00	5.0	5.0	3.8	3.8	50338
N12+50W1+50	4.6	4.6	4.0	4.4	50325
N12+50W2+00	5.0	5.0	4.5	4.5	4763
N12+50W2+50	4.5	5.0	4.5	3.5	6238
N12+50W3+00	4.2	4.2	4.2	4.2	4797
N12+50W3+50	4.5	4.5	4.0	4.0	4807
N12+50W4+00	5.0	5.0	3.0	5.0	50338
N12+50W4+50	5.0	4.5	4.0	3.5	50320
N12+50W5+00	5.0	5.0	4.2	4.0	50277
N12+50W5+50	19.0	0.0	38.0	6.0	50078
N12+50W6+00	26.0	0.0	145.0	6.0	50319
N12+50W6+50	6.0	6.0	4.0	5.0	50344
N12+50W7+00	5.0	5.5	4.0	6.5	50315
N12+50W7+50	5.0	5.0	5.0	4.0	49983
N12+50W8+00	5.0	5.0	4.0	4.5	50274
N12+50W8+50	5.0	6.0	5.0	5.0	50295

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N13+00W0+00	7.0	6.8	4.4	4.6	50324
N13+00W0+50	16.0	9.0	8.0	3.5	50331
N13+00W1+00	5.0	5.0	3.8	4.0	50348
N13+00W1+50	4.8	4.6	4.0	4.4	50311
N13+00W2+00	5.0	5.0	4.0	4.5	4768
N13+00W2+50	5.0	5.0	4.0	4.0	4777
N13+00W3+00	4.4	4.4	4.6	4.6	4796
N13+00W3+50	4.5	4.5	4.0	4.5	4806
N13+00W4+00	4.5	4.5	4.5	5.5	50325
N13+00W4+50	4.5	4.0	4.5	4.0	50265
N13+00W5+00	4.5	4.8	4.5	3.8	50243
N13+00W5+50	20.0	5.0	12.0	7.0	49615
N13+00W6+00	22.0	0.0	135.0	7.0	50683
N13+00W6+50	5.0	6.0	4.0	4.0	50331
N13+00W7+00	4.5	5.0	4.5	4.5	50313
N13+00W7+50	5.0	5.0	4.5	4.5	55862
N13+00W8+00	4.8	4.8	3.5	4.0	50279
N13+00W8+50	5.0	6.0	4.5	4.5	50257
N13+50W0+00	7.2	7.5	4.8	4.2	50310
N13+50W0+50	16.0	9.0	8.0	3.4	50264
N13+50W1+00	5.0	5.2	4.0	4.2	50346
N13+50W1+50	4.6	4.6	4.0	4.4	50352
N13+50W2+00	5.0	5.0	4.6	4.2	4768
N13+50W2+50	4.4	4.5	4.0	4.0	4783
N13+50W3+00	4.5	4.5	4.5	4.2	4798
N13+50W3+50	4.5	4.5	4.5	4.5	4799
N13+50W4+00	4.5	4.5	5.0	5.0	50259
N13+50W4+50	5.0	4.5	5.0	4.0	50259
N13+50W5+00	4.8	4.8	4.0	4.0	50307
N13+50W5+50	5.5	10.5	12.0	7.0	49496
N13+50W6+00	0.0	0.0	60.0	16.0	51609
N13+50W6+50	6.0	6.0	5.0	4.0	50388
N13+50W7+00	5.0	5.0	4.8	4.5	50258
N13+50W7+50	5.0	4.5	5.0	5.0	58605
N13+50W8+00	4.8	4.5	5.0	3.8	50267
N13+50W8+50	5.0	5.0	4.0	4.0	50351
N14+00W0+00	20.0	20.5	5.0	8.0	50307
N14+00W0+50	17.0	12.0	7.0	4.0	50223
N14+00W1+00	5.0	5.0	3.8	4.0	50318
N14+00W1+50	4.6	4.6	4.6	4.0	50278
N14+00W2+00	5.0	4.8	4.8	4.2	4769
N14+00W2+50	4.4	4.5	4.0	3.6	4787
N14+00W3+00	4.6	4.6	4.2	4.0	4805
N14+00W3+50	4.5	4.5	4.5	4.5	4795
N14+00W4+00	5.0	5.0	5.0	5.0	50258

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N14+00W4+50	4.0	5.0	5.0	5.0	50226
N14+00W5+00	4.8	4.6	4.0	4.0	50297
N14+00W5+50	14.5	3.5	4.5	5.0	50071
N14+00W6+00	52.0	0.0	68.0	5.0	50313
N14+00W6+50	6.0	6.0	5.0	5.0	50464
N14+00W7+00	5.0	5.0	4.5	4.5	50302
N14+00W7+50	5.0	5.0	4.0	4.0	48535
N14+00W8+00	4.8	4.5	4.5	3.5	50357
N14+00W8+50	5.0	5.0	5.0	5.0	50370
N14+50W0+00	25.0	25.0	7.0	5.0	50361
N14+50W0+50	19.0	11.0	8.0	4.0	50216
N14+50W1+00	5.2	5.2	4.4	4.0	50272
N14+50W1+50	4.6	4.6	4.0	4.6	50255
N14+50W2+00	5.2	5.0	5.0	4.8	4783
N14+50W2+50	5.0	4.8	4.2	4.0	4776
N14+50W3+00	4.6	4.8	4.0	4.0	4802
N14+50W3+50	4.5	4.5	4.5	4.5	4794
N14+50W4+00	5.0	5.0	5.0	6.5	50287
N14+50W4+50	5.0	4.5	4.5	4.0	50320
N14+50W5+00	4.8	4.8	4.2	4.2	50370
N14+50W5+50	6.0	6.0	5.0	5.5	50225
N14+50W6+00	19.5	0.0	170.0	6.0	50385
N14+50W6+50	5.0	6.5	4.0	4.5	50382
N14+50W7+00	5.0	5.0	4.5	4.5	50259
N14+50W7+50	5.0	5.0	4.5	4.5	54581
N14+50W8+00	4.8	5.0	4.0	4.0	50254
N14+50W8+50	5.0	5.0	5.0	4.0	50339
N15+00W0+00	26.0	28.0	13.0	10.0	50851
N15+00W0+50	22.0	14.0	8.0	4.0	47407
N15+00W1+00	5.4	5.4	4.0	4.0	50251
N15+00W1+50	4.6	4.8	4.0	4.0	50326
N15+00W2+00	5.4	5.4	5.0	5.0	5213
N15+00W2+50	5.0	5.0	4.4	5.0	5306
N15+00W3+00	5.0	5.0	4.0	5.0	4798
N15+00W3+50	5.0	5.0	5.0	4.5	4799
N15+00W4+00	4.5	4.5	5.0	4.5	50295
N15+00W4+50	5.0	5.0	4.5	3.5	50352
N15+00W5+00	4.8	4.8	4.5	4.5	50329
N15+00W5+50	5.5	5.5	4.5	4.5	50334
N15+00W6+00	11.0	0.0	170.0	4.5	50365
N15+00W6+50	6.0	5.0	5.0	4.0	50416
N15+00W7+00	5.0	5.5	4.5	4.5	50296
N15+00W7+50	5.0	5.0	5.0	4.0	51240
N15+00W8+00	4.8	4.5	4.0	4.4	50348
N15+00W8+50	5.0	5.0	4.0	5.0	50362

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N15+50W0+00	13.5	13.0	6.0	5.0	50212
N15+50W0+50	13.0	15.0	6.0	5.0	50326
N15+50W1+00	5.4	5.4	4.0	3.8	50324
N15+50W1+50	4.6	4.6	4.0	4.0	50292
N15+50W2+00	5.4	5.4	4.6	6.0	4989
N15+50W2+50	5.4	5.2	4.2	4.6	4927
N15+50W3+00	5.0	5.0	4.5	4.5	4804
N15+50W3+50	5.4	5.2	5.4	5.0	4803
N15+50W4+00	9.0	6.0	8.0	8.0	50676
N15+50W4+50	5.0	5.0	4.5	4.5	50221
N15+50W5+00	5.0	5.0	4.6	4.6	50309
N15+50W5+50	5.5	6.0	4.0	4.0	50339
N15+50W6+00	15.0	0.0	180.0	4.0	50468
N15+50W6+50	5.5	6.0	5.0	4.0	50390
N15+50W7+00	5.0	5.0	4.5	4.5	50346
N15+50W7+50	5.0	5.0	4.5	5.0	50900
N15+50W8+00	5.0	5.0	4.5	3.5	50359
N15+50W8+50	5.0	4.0	4.0	4.0	50365
N16+00W0+00	8.0	8.4	4.2	4.6	50318
N16+00W0+50	19.0	14.0	8.0	4.0	50233
N16+00W1+00	5.4	5.4	3.8	3.8	50304
N16+00W1+50	4.6	4.6	4.0	4.6	50339
N16+00W2+00	6.0	6.0	6.0	5.8	5104
N16+00W2+50	5.4	5.4	4.8	4.9	4819
N16+00W3+00	5.0	5.2	4.2	4.2	4798
N16+00W3+50	5.0	5.2	5.2	5.4	4792
N16+00W4+00	5.0	5.0	4.5	4.5	50343
N16+00W4+50	5.0	5.0	4.0	5.0	50344
N16+00W5+00	5.4	5.2	4.4	4.5	50292
N16+00W5+50	5.8	5.8	3.8	4.2	50243
N16+00W6+00	4.5	0.0	130.0	10.0	50353
N16+00W6+50	5.5	6.0	6.0	4.0	50433
N16+00W7+00	5.5	5.5	4.5	4.5	50273
N16+00W7+50	5.0	5.0	5.0	5.0	50165
N16+00W8+00	5.0	5.0	4.5	5.0	50342
N16+00W8+50	5.0	5.0	4.0	4.0	50340
N16+50W0+00	8.0	8.0	4.6	4.4	50295
N16+50W0+50	21.0	8.6	10.0	4.0	50307
N16+50W1+00	5.4	5.4	3.8	3.8	50351
N16+50W1+50	4.6	4.6	4.0	4.0	50304
N16+50W2+00	7.2	7.2	6.2	7.0	4926
N16+50W2+50	6.0	6.0	5.6	5.6	4777
N16+50W3+00	6.0	6.0	5.5	5.5	4804
N16+50W3+50	5.8	5.8	6.0	5.5	4807
N16+50W4+00	6.0	6.0	5.0	5.0	50265

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N16+50W4+50	5.0	5.0	4.0	4.0	50250
N16+50W5+00	5.8	5.8	4.8	4.8	50274
N16+50W5+50	14.0	25.0	5.5	1.5	49804
N16+50W6+00	5.5	0.0	185.0	6.0	50171
N16+50W6+50	6.0	6.0	5.0	5.0	50316
N16+50W7+00	5.5	6.0	5.0	5.5	50323
N16+50W7+50	5.5	5.5	5.0	5.0	50224
N16+50W8+00	5.0	5.0	4.0	5.0	50268
N16+50W8+50	5.0	5.0	6.0	5.0	50359
N17+00W0+00	6.8	7.8	5.0	4.8	50313
N17+00W0+50	22.0	6.6	13.0	4.2	50255
N17+00W1+00	5.4	5.8	3.8	4.0	50341
N17+00W1+50	4.6	4.8	4.0	3.8	50279
N17+00W2+00	7.4	7.0	6.0	7.8	4842
N17+00W2+50	7.0	7.0	8.0	6.0	5296
N17+00W3+00	6.8	6.8	6.0	6.0	4798
N17+00W3+50	6.2	6.2	5.5	5.6	4804
N17+00W4+00	6.0	6.0	4.5	5.0	50325
N17+00W4+50	5.0	5.0	4.0	4.0	50250
N17+00W5+00	5.5	5.5	5.5	5.0	50247
N17+00W5+50	6.5	6.5	5.5	5.5	50159
N17+00W6+00	8.0	0.0	145.0	5.0	50476
N17+00W6+50	6.5	6.5	5.0	5.0	50352
N17+00W7+00	5.5	6.0	5.0	5.5	50310
N17+00W7+50	5.5	5.5	5.0	5.5	50290
N17+00W8+00	5.5	5.0	5.5	5.0	50329
N17+00W8+50	5.5	5.0	5.0	6.0	50367
N17+50W0+00	7.0	7.0	4.2	4.8	50357
N17+50W0+50	19.0	11.0	7.0	4.0	50318
N17+50W1+00	6.0	6.0	4.0	4.0	50326
N17+50W1+50	4.6	4.6	3.8	4.8	50312
N17+50W2+00	8.2	6.6	8.0	8.6	4782
N17+50W2+50	8.0	8.0	6.0	8.0	5724
N17+50W3+00	8.8	8.8	7.0	7.4	4798
N17+50W3+50	9.2	9.2	11.0	10.0	4807
N17+50W4+00	10.0	10.5	10.5	10.0	49211
N17+50W4+50	6.0	6.5	5.5	6.5	50322
N17+50W5+00	6.4	6.4	6.0	5.5	50314
N17+50W5+50	6.5	6.0	4.5	4.5	50137
N17+50W6+00	19.0	0.0	145.0	15.0	50443
N17+50W6+50	NA	NA	NA	NA	NA
N17+50W7+00	NA	NA	NA	NA	NA
N17+50W7+50	NA	NA	NA	NA	NA
N17+50W8+00	5.0	5.5	4.0	6.0	50273
N17+50W8+50	5.5	5.2	5.0	4.8	50359

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N18+00W0+00	6.6	6.0	4.6	4.2	50320
N18+00W0+50	8.2	8.2	4.2	4.6	50348
N18+00W1+00	9.0	9.2	4.4	4.0	50346
N18+00W1+50	5.0	5.2	4.0	4.2	50286
N18+00W2+00	8.8	8.0	8.0	8.4	5241
N18+00W2+50	9.0	7.0	9.0	7.0	5587
N18+00W3+00	8.6	8.5	7.8	7.0	4805
N18+00W3+50	8.2	8.2	6.5	7.0	4795
N18+00W4+00	9.0	9.0	9.5	10.5	50343
N18+00W4+50	6.0	6.5	5.0	4.5	50308
N18+00W5+00	6.4	6.5	5.5	5.5	50319
N18+00W5+50	7.0	7.0	5.5	5.5	50286
N18+00W6+00	5.0	0.0	110.0	4.8	50406
N18+00W6+50	NA	NA	NA	NA	NA
N18+00W7+00	NA	NA	NA	NA	NA
N18+00W7+50	NA	NA	NA	NA	NA
N18+00W8+00	5.5	5.0	5.0	5.0	50349
N18+00W8+50	5.5	6.0	6.0	6.0	50305
N18+50W0+00	6.0	6.4	4.4	4.8	50341
N18+50W0+50	5.0	5.0	5.2	4.8	50334
N18+50W1+00	18.0	18.0	5.4	8.4	50339
N18+50W1+50	10.0	9.5	4.0	4.0	50287
N18+50W2+00	10.5	8.5	8.0	8.0	5506
N18+50W2+50	7.0	7.5	6.0	7.0	4914
N18+50W3+00	7.2	7.2	6.2	6.0	4809
N18+50W3+50	6.5	6.5	6.0	6.0	4808
N18+50W4+00	7.0	7.0	7.0	5.0	50295
N18+50W4+50	6.0	6.0	6.0	5.0	50309
N18+50W5+00	6.4	6.4	5.4	5.5	50390
N18+50W5+50	6.6	6.5	5.5	5.0	50314
N18+50W6+00	20.0	0.0	95.0	3.5	50448
N18+50W6+50	NA	NA	NA	NA	NA
N18+50W7+00	NA	NA	NA	NA	NA
N18+50W7+50	NA	NA	NA	NA	NA
N18+50W8+00	5.0	5.0	4.0	5.0	50304
N18+50W8+50	NA	NA	NA	NA	NA
N19+00W0+00	6.2	6.4	4.2	4.2	50304
N19+00W0+50	4.4	4.8	3.8	4.0	50342
N19+00W1+00	5.2	4.8	4.4	4.0	50328
N19+00W1+50	10.0	10.0	4.0	4.2	50300
N19+00W2+00	22.0	21.0	10.0	15.0	5516
N19+00W2+50	10.0	8.0	7.0	6.0	4983
N19+00W3+00	6.8	6.6	5.8	5.2	4805
N19+00W3+50	6.2	6.0	5.0	5.5	4810
N19+00W4+00	6.0	6.5	3.0	5.0	50342



SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N19+00W4+50	6.0	6.0	6.0	6.0	50297
N19+00W5+00	5.8	5.8	5.4	5.2	50378
N19+00W5+50	6.2	6.2	4.5	5.0	50311
N19+00W6+00	28.5	0.0	70.0	5.0	50429
N19+00W6+50	NA	NA	NA	NA	NA
N19+00W7+00	NA	NA	NA	NA	NA
N19+00W7+50	NA	NA	NA	NA	NA
N19+00W8+00	4.8	4.0	3.0	4.5	50341
N19+00W8+50	NA	NA	NA	NA	NA
N19+50W0+00	6.2	6.6	3.8	4.0	50313
N19+50W0+50	4.8	4.4	3.6	3.8	50295
N19+50W1+00	4.8	4.6	4.6	4.0	50316
N19+50W1+50	5.0	5.0	4.2	4.2	50333
N19+50W2+00	9.5	6.8	8.5	9.0	5339
N19+50W2+50	18.0	16.0	7.0	6.5	5070
N19+50W3+00	16.0	21.0	12.0	8.0	4798
N19+50W3+50	7.5	7.0	5.0	5.0	4796
N19+50W4+00	7.0	6.0	7.0	5.0	50351
N19+50W4+50	6.0	5.5	5.0	4.0	50278
N19+50W5+00	5.4	5.4	4.8	4.5	50296
N19+50W5+50	6.0	5.6	5.0	4.5	50323
N19+50W6+00	21.0	0.0	78.0	0.0	50356
N19+50W6+50	NA	NA	NA	NA	NA
N19+50W7+00	NA	NA	NA	NA	NA
N19+50W7+50	NA	NA	NA	NA	NA
N19+50W8+00	NA	NA	NA	NA	NA
N19+50W8+50	NA	NA	NA	NA	NA
N2+00W0+00	9.0	10.0	3.0	4.0	50257
N2+00W0+50	4.2	4.0	3.4	3.4	50311
N2+00W1+00	4.2	4.3	3.8	4.0	50334
N2+00W1+50	150.0	0.0	120.0	7.5	50354
N2+00W2+00	10.0	6.5	12.0	9.5	50469
N2+00W2+50	4.0	4.0	4.0	5.0	6586
N2+00W3+00	3.8	3.8	3.5	3.5	4808
N2+00W3+50	4.0	4.0	4.0	4.0	4792
N2+00W4+00	4.0	4.0	4.0	5.0	50284
N2+00W4+50	4.0	4.0	3.5	3.5	50273
N2+00W5+00	3.8	3.8	3.5	3.2	50337
N2+00W5+50	4.0	4.0	3.8	4.0	50324
N2+00W6+00	4.0	4.0	4.5	3.5	50496
N2+00W6+50	4.0	4.0	3.0	5.0	50317
N2+00W7+00	3.7	3.7	3.5	3.5	50301
N2+00W7+50	4.0	4.0	3.5	3.5	50332
N2+00W8+00	4.0	4.0	4.0	3.5	50372
N2+00W8+50	4.0	4.0	3.0	4.0	50285

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N2+50W0+00	9.0	10.0	4.0	4.0	50290
N2+50W0+50	4.4	4.2	3.8	3.6	50221
N2+50W1+00	4.2	4.2	4.0	4.0	50324
N2+50W1+50	38.0	0.0	55.0	8.0	50322
N2+50W2+00	10.0	6.0	12.0	10.0	50144
N2+50W2+50	4.5	5.0	5.0	3.5	5481
N2+50W3+00	3.8	4.0	3.2	3.5	4806
N2+50W3+50	4.0	4.0	3.5	4.0	4805
N2+50W4+00	4.0	4.0	5.0	5.5	50315
N2+50W4+50	4.0	4.0	4.5	3.5	50264
N2+50W5+00	3.8	3.8	3.4	3.2	50310
N2+50W5+50	4.5	4.5	4.0	4.5	50584
N2+50W6+00	3.8	4.0	4.5	5.0	50549
N2+50W6+50	4.0	4.0	3.0	4.0	50351
N2+50W7+00	3.5	3.6	3.5	3.5	50290
N2+50W7+50	4.0	4.0	3.5	4.0	50332
N2+50W8+00	3.5	3.5	3.5	3.5	50308
N2+50W8+50	4.0	4.0	4.0	4.0	50341
N20+00W0+00	6.6	6.8	4.4	4.0	50279
N20+00W0+50	0.0	5.2	20.0	4.6	50227
N20+00W1+00	5.0	4.8	4.0	4.8	50273
N20+00W1+50	4.8	4.8	4.2	4.0	50308
N20+00W2+00	8.0	0.0	8.0	18.0	5368
N20+00W2+50	4.8	4.8	4.2	4.8	5929
N20+00W3+00	6.2	6.2	4.2	4.5	4802
N20+00W3+50	10.0	10.0	5.0	5.0	4794
N20+00W4+00	0.0	3.0	10.0	38.0	50345
N20+00W4+50	7.0	7.0	4.4	5.0	50335
N20+00W5+00	5.5	5.5	4.5	4.0	50323
N20+00W5+50	5.5	5.5	4.5	4.5	50347
N20+00W6+00	12.0	12.0	4.0	4.0	50398
N20+00W6+50	NA	NA	NA	NA	NA
N20+00W7+00	18.0	22.0	12.0	13.0	49827
N20+00W7+50	NA	NA	NA	NA	NA
N20+00W8+00	NA	NA	NA	NA	NA
N20+00W8+50	NA	NA	NA	NA	NA
N20+50W0+00	6.8	7.0	4.6	4.6	50336
N20+50W0+50	4.8	5.0	3.6	3.8	50309
N20+50W1+00	4.5	4.5	4.5	4.5	50266
N20+50W1+50	4.8	4.8	4.2	4.6	50336
N20+50W2+00	9.0	6.5	9.5	10.5	5233
N20+50W2+50	5.4	5.4	5.4	5.4	5169
N20+50W3+00	4.8	4.8	4.2	4.5	4790
N20+50W3+50	5.5	5.5	4.0	4.5	4804
N20+50W4+00	6.0	5.5	4.5	6.0	50246

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N20+50W4+50	9.5	10.0	6.0	5.0	50286
N20+50W5+00	0.0	8.0	7.5	17.0	50299
N20+50W5+50	7.0	6.5	4.0	3.5	50331
N20+50W6+00	11.0	11.0	6.0	4.0	50305
N20+50W6+50	24.0	32.0	15.0	6.5	50411
N20+50W7+00	12.0	12.0	7.0	8.0	50227
N20+50W7+50	NA	NA	NA	NA	NA
N20+50W8+00	NA	NA	NA	NA	NA
N20+50W8+50	NA	NA	NA	NA	NA
N21+00W0+00	7.2	7.4	5.0	5.4	50259
N21+00W0+50	4.8	4.8	4.0	4.6	50236
N21+00W1+00	4.5	4.5	4.2	4.5	50322
N21+00W1+50	4.4	4.4	3.8	4.0	50311
N21+00W2+00	8.0	7.0	8.5	9.0	5032
N21+00W2+50	4.5	4.5	4.5	4.0	4892
N21+00W3+00	4.4	4.5	4.0	4.0	4797
N21+00W3+50	4.5	4.5	4.2	4.5	4799
N21+00W4+00	5.0	5.0	5.0	4.0	50329
N21+00W4+50	6.0	6.0	5.0	4.0	50343
N21+00W5+00	8.5	8.2	3.5	4.2	50354
N21+00W5+50	2.5	9.0	5.5	18.0	50314
N21+00W6+00	12.0	12.0	4.0	19.0	50395
N21+00W6+50	11.0	10.0	4.0	6.0	50424
N21+00W7+00	0.0	0.0	12.0	40.0	50256
N21+00W7+50	12.0	12.0	8.0	11.0	49937
N21+00W8+00	8.5	8.5	4.5	4.0	50237
N21+00W8+50	0.0	0.0	4.0	80.0	50168
N3+00W0+00	9.0	9.0	4.0	3.5	50301
N3+00W0+50	4.2	4.2	2.8	3.2	50244
N3+00W1+00	4.2	4.1	3.8	3.8	50347
N3+00W1+50	30.0	0.0	9.0	7.0	50205
N3+00W2+00	10.0	6.5	12.0	10.0	50414
N3+00W2+50	4.5	4.5	4.5	3.0	5135
N3+00W3+00	4.0	3.8	3.5	3.5	4799
N3+00W3+50	4.0	4.0	4.0	4.0	4791
N3+00W4+00	4.0	4.0	3.0	4.0	50310
N3+00W4+50	4.0	4.0	5.0	3.0	50359
N3+00W5+00	3.8	3.8	3.2	3.5	50272
N3+00W5+50	10.5	0.0	0.0	15.0	50068
N3+00W6+00	4.0	3.5	4.5	4.0	50299
N3+00W6+50	4.0	4.0	5.0	3.5	50376
N3+00W7+00	3.7	3.8	3.5	3.5	50288
N3+00W7+50	4.0	4.0	3.5	3.5	50331
N3+00W8+00	3.5	3.5	3.5	3.0	50350
N3+00W8+50	4.0	4.0	2.0	3.5	50343

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N3+50W0+00	8.0	9.0	4.0	4.0	50320
N3+50W0+50	4.0	4.0	3.2	3.2	50237
N3+50W1+00	4.0	4.0	3.5	3.5	50313
N3+50W1+50	0.5	3.0	8.0	7.0	49748
N3+50W2+00	10.0	6.0	13.0	10.0	50686
N3+50W2+50	4.5	4.5	4.5	6.0	4932
N3+50W3+00	4.0	4.0	3.5	3.5	4795
N3+50W3+50	4.0	4.0	3.0	3.5	4799
N3+50W4+00	4.0	4.0	4.0	4.5	50291
N3+50W4+50	4.0	4.0	4.0	6.0	50252
N3+50W5+00	3.8	3.8	3.8	3.2	50276
N3+50W5+50	12.0	0.0	1.5	15.0	59484
N3+50W6+00	4.0	4.0	3.0	3.0	50345
N3+50W6+50	4.0	4.0	4.5	3.5	50428
N3+50W7+00	3.8	4.0	3.5	3.5	50310
N3+50W7+50	4.0	4.0	3.5	3.5	50327
N3+50W8+00	3.5	3.0	3.5	5.0	50288
N3+50W8+50	4.0	4.0	2.5	4.0	50255
N4+00W0+00	8.0	9.0	4.0	3.5	50306
N4+00W0+50	4.4	4.0	3.8	3.8	50243
N4+00W1+00	4.0	4.0	3.5	3.5	50325
N4+00W1+50	4.6	4.6	4.6	4.6	50337
N4+00W2+00	6.0	8.0	10.0	14.5	50906
N4+00W2+50	4.5	4.5	5.0	5.0	4908
N4+00W3+00	4.0	4.0	3.5	3.5	4796
N4+00W3+50	4.0	4.0	3.0	3.5	4802
N4+00W4+00	4.0	4.0	3.0	4.0	50328
N4+00W4+50	4.0	4.0	5.0	4.0	50290
N4+00W5+00	3.8	3.8	3.8	3.8	50309
N4+00W5+50	3.8	1.8	2.5	4.2	50333
N4+00W6+00	4.0	4.0	4.5	3.5	50438
N4+00W6+50	4.0	4.0	4.0	4.0	50378
N4+00W7+00	4.0	4.0	3.5	3.5	50353
N4+00W7+50	4.0	4.0	3.5	3.5	50330
N4+00W8+00	3.8	3.8	3.5	4.0	50334
N4+00W8+50	5.0	4.5	3.0	5.0	50361
N4+50W0+00	9.0	9.0	3.5	3.5	50294
N4+50W0+50	4.2	4.0	3.0	3.6	50238
N4+50W1+00	4.2	4.2	4.0	4.0	50369
N4+50W1+50	4.6	4.6	4.6	4.6	50281
N4+50W2+00	9.5	5.5	12.0	9.5	50325
N4+50W2+50	4.5	4.5	4.0	4.0	4781
N4+50W3+00	4.0	3.8	3.8	3.8	4802
N4+50W3+50	4.0	4.0	3.5	3.5	4795
N4+50W4+00	4.0	4.0	4.5	4.0	50340

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N4+50W4+50	4.0	4.0	4.5	4.0	50355
N4+50W5+00	3.8	4.0	4.0	3.5	50302
N4+50W5+50	4.0	4.0	3.5	3.5	50290
N4+50W6+00	4.0	4.0	4.5	3.5	50474
N4+50W6+50	4.0	4.0	4.0	3.5	50381
N4+50W7+00	4.0	4.0	3.5	3.5	50301
N4+50W7+50	4.0	4.0	4.0	4.0	50339
N4+50W8+00	4.0	4.0	3.0	4.0	50319
N4+50W8+50	5.0	4.0	2.0	4.0	50364
N5+00W0+00	9.0	4.0	9.0	4.0	50268
N5+00W0+50	4.2	4.2	4.6	3.6	50259
N5+00W1+00	4.2	4.2	3.8	4.0	50340
N5+00W1+50	4.6	4.2	4.6	4.8	50353
N5+00W2+00	9.0	5.0	11.0	9.0	50456
N5+00W2+50	4.0	4.5	4.0	4.5	4780
N5+00W3+00	4.0	4.0	4.0	3.5	4813
N5+00W3+50	4.0	4.0	3.5	4.0	4791
N5+00W4+00	4.0	4.5	4.0	3.5	50311
N5+00W4+50	5.0	5.0	4.0	4.5	50271
N5+00W5+00	4.0	4.0	3.8	3.5	50337
N5+00W5+50	4.0	4.0	3.5	3.5	50334
N5+00W6+00	4.0	4.0	3.0	3.5	50412
N5+00W6+50	4.0	4.0	5.0	5.0	50476
N5+00W7+00	4.0	4.0	3.5	3.5	50300
N5+00W7+50	4.0	4.0	3.8	4.0	50304
N5+00W8+00	4.0	4.0	3.5	3.0	50261
N5+00W8+50	4.5	4.5	2.0	6.0	50306
N5+50W0+00	9.5	8.5	4.0	4.0	50338
N5+50W0+50	4.2	4.2	2.8	3.2	50339
N5+50W1+00	3.8	4.2	4.2	3.5	50354
N5+50W1+50	4.4	4.0	5.0	4.6	50288
N5+50W2+00	9.5	5.5	12.5	9.5	50440
N5+50W2+50	4.0	4.0	4.0	4.0	4780
N5+50W3+00	4.0	4.0	4.0	4.0	4797
N5+50W3+50	4.0	4.0	4.5	3.5	4800
N5+50W4+00	4.0	4.0	3.0	6.0	50333
N5+50W4+50	4.0	4.0	3.0	3.5	50304
N5+50W5+00	2.5	3.0	3.0	4.0	50469
N5+50W5+50	4.0	4.0	3.5	3.5	50322
N5+50W6+00	4.0	4.0	4.5	3.5	50399
N5+50W6+50	4.5	4.2	3.0	4.0	50396
N5+50W7+00	4.2	4.2	3.6	3.6	50279
N5+50W7+50	4.5	4.2	4.0	4.0	50320
N5+50W8+00	4.0	4.0	3.0	4.0	50337
N5+50W8+50	4.0	3.5	3.0	4.0	50259

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N6+00W0+00	8.0	4.0	9.5	3.0	50348
N6+00W0+50	4.2	4.2	3.8	3.4	50303
N6+00W1+00	4.2	4.0	4.0	4.0	50358
N6+00W1+50	4.6	4.6	4.6	4.6	50315
N6+00W2+00	9.5	6.0	11.0	9.5	50286
N6+00W2+50	4.0	4.5	3.5	4.0	4781
N6+00W3+00	4.0	4.0	4.0	4.0	4803
N6+00W3+50	4.0	4.0	3.5	4.0	4798
N6+00W4+00	4.0	4.0	5.0	4.0	50313
N6+00W4+50	4.0	4.0	4.0	4.0	50342
N6+00W5+00	0.3	3.5	12.0	5.0	22228
N6+00W5+50	4.2	4.2	4.0	3.8	50315
N6+00W6+00	4.5	4.5	5.0	3.5	50385
N6+00W6+50	4.5	4.0	3.0	4.0	50460
N6+00W7+00	4.2	4.3	3.6	3.6	50303
N6+00W7+50	4.2	4.2	3.8	4.0	50327
N6+00W8+00	4.0	4.0	4.0	4.0	50326
N6+00W8+50	4.0	4.0	3.5	4.0	50344
N6+50W0+00	8.5	4.0	8.5	5.0	50323
N6+50W0+50	4.2	4.2	3.6	4.8	50274
N6+50W1+00	4.2	4.2	3.5	3.8	50350
N6+50W1+50	4.6	4.6	4.0	4.6	50291
N6+50W2+00	8.5	5.0	11.0	10.0	49944
N6+50W2+50	4.5	4.5	4.0	3.5	5285
N6+50W3+00	4.0	4.0	3.5	4.0	4802
N6+50W3+50	4.0	4.0	3.5	3.5	4790
N6+50W4+00	4.5	4.5	3.0	3.0	50318
N6+50W4+50	4.5	4.0	5.0	3.5	50268
N6+50W5+00	0.0	3.4	10.0	5.0	6143
N6+50W5+50	4.2	4.2	4.0	4.0	50314
N6+50W6+00	4.5	4.5	5.0	3.2	50434
N6+50W6+50	4.5	4.8	4.0	7.0	50372
N6+50W7+00	4.2	4.2	3.5	3.5	50287
N6+50W7+50	4.2	4.2	3.8	3.8	50335
N6+50W8+00	4.0	4.0	4.0	5.0	50270
N6+50W8+50	4.0	4.0	3.5	3.0	50292
N7+00W0+00	9.0	8.5	7.0	6.0	50580
N7+00W0+50	4.0	4.2	2.4	5.0	50255
N7+00W1+00	4.2	4.2	3.8	3.8	50329
N7+00W1+50	4.8	4.8	4.4	5.0	50328
N7+00W2+00	10.0	5.5	12.5	10.0	4909
N7+00W2+50	4.5	4.5	4.5	3.5	4787
N7+00W3+00	4.0	4.0	3.5	3.5	4799
N7+00W3+50	4.2	4.2	4.0	4.0	4790
N7+00W4+00	4.5	4.0	7.0	6.0	50297

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N7+00W4+50	4.0	4.5	5.5	4.0	50343
N7+00W5+00	0.0	3.8	9.0	5.5	8924
N7+00W5+50	4.5	4.5	4.5	4.0	50298
N7+00W6+00	4.5	4.5	3.8	5.0	50465
N7+00W6+50	3.5	5.0	7.0	5.0	50469
N7+00W7+00	4.2	4.2	3.4	3.6	50270
N7+00W7+50	4.2	4.0	3.5	3.6	50288
N7+00W8+00	4.0	4.0	3.5	5.0	50314
N7+00W8+50	4.0	4.5	4.5	4.0	50275
N7+50W0+00	6.5	7.5	4.0	4.0	50254
N7+50W0+50	3.8	3.8	4.0	3.8	50255
N7+50W1+00	4.2	4.6	4.0	4.2	50322
N7+50W1+50	4.6	4.6	4.6	4.0	50329
N7+50W2+00	10.5	5.0	13.0	12.0	5069
N7+50W2+50	4.5	4.5	4.5	4.4	4833
N7+50W3+00	4.2	4.2	4.0	4.0	4807
N7+50W3+50	4.2	4.2	4.2	4.2	4974
N7+50W4+00	4.5	4.5	3.5	3.0	50316
N7+50W4+50	4.0	4.5	5.0	3.5	50307
N7+50W5+00	4.2	4.2	4.0	3.8	50291
N7+50W5+50	4.5	4.5	4.0	4.0	50275
N7+50W6+00	4.5	4.5	3.5	3.5	50468
N7+50W6+50	4.8	4.5	5.0	5.0	50413
N7+50W7+00	4.2	4.3	3.8	4.0	50303
N7+50W7+50	4.2	4.2	3.5	3.5	50285
N7+50W8+00	4.0	4.0	2.5	4.0	50327
N7+50W8+50	4.0	4.0	4.0	4.0	50253
N8+00W0+00	5.5	6.0	4.0	5.0	50321
N8+00W0+50	5.0	4.8	3.6	3.2	50335
N8+00W1+00	2.5	1.8	5.2	4.4	50337
N8+00W1+50	5.0	5.0	4.0	4.6	50276
N8+00W2+00	0.0	0.0	20.0	21.0	4762
N8+00W2+50	4.5	4.5	4.5	5.0	5946
N8+00W3+00	4.5	4.5	4.0	4.0	4800
N8+00W3+50	4.4	4.4	4.0	3.8	4790
N8+00W4+00	4.5	4.5	4.5	4.5	50311
N8+00W4+50	4.0	4.0	4.5	3.5	50280
N8+00W5+00	4.5	4.5	4.5	4.0	49517
N8+00W5+50	4.5	4.5	4.5	4.5	50240
N8+00W6+00	4.5	4.5	4.0	4.0	50512
N8+00W6+50	2.0	4.5	5.0	3.5	50402
N8+00W7+00	4.2	4.2	3.5	3.5	50292
N8+00W7+50	4.5	4.0	3.5	3.5	50332
N8+00W8+00	4.0	4.0	4.0	3.0	50315
N8+00W8+50	3.5	4.0	4.0	4.0	50264

SITE 3 GEOPHYSICAL SURVEY

COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N8+50W0+00	5.5	5.5	4.0	5.0	50343
N8+50W0+50	5.8	3.0	10.0	3.6	50287
N8+50W1+00	5.0	5.0	4.0	4.0	50334
N8+50W1+50	1.5	1.0	7.8	6.0	50325
N8+50W2+00	7.5	3.5	12.0	11.0	5045
N8+50W2+50	5.0	5.0	4.0	5.0	4891
N8+50W3+00	4.5	4.5	4.5	4.5	4798
N8+50W3+50	4.2	4.5	4.2	4.0	4803
N8+50W4+00	0.0	4.5	15.0	3.0	49832
N8+50W4+50	4.5	4.0	5.0	5.0	50321
N8+50W5+00	9.0	1.3	9.0	6.0	49545
N8+50W5+50	4.8	4.5	4.5	4.5	50357
N8+50W6+00	4.8	4.8	3.5	3.5	50363
N8+50W6+50	4.2	4.0	4.8	4.5	29977
N8+50W7+00	4.2	4.2	3.8	3.8	50269
N8+50W7+50	4.5	4.5	4.0	4.5	50259
N8+50W8+00	4.0	4.0	7.0	5.0	50265
N8+50W8+50	4.5	4.5	3.0	4.5	50348
N9+00W0+00	5.6	6.0	4.2	4.0	50366
N9+00W0+50	5.6	1.2	4.2	3.4	50229
N9+00W1+00	5.0	4.8	4.0	4.0	50333
N9+00W1+50	5.4	5.6	4.2	4.8	50304
N9+00W2+00	13.5	8.0	15.0	11.5	4764
N9+00W2+50	6.0	11.0	1.5	5.0	5884
N9+00W3+00	4.6	4.5	4.5	4.5	4799
N9+00W3+50	4.5	4.5	4.0	3.8	4794
N9+00W4+00	4.0	4.5	6.0	5.0	50341
N9+00W4+50	4.5	5.0	4.0	6.0	50345
N9+00W5+00	8.0	0.5	27.0	5.0	50266
N9+00W5+50	5.0	4.8	5.0	4.5	50336
N9+00W6+00	4.8	4.5	4.8	4.0	50401
N9+00W6+50	5.0	4.5	4.0	4.5	50415
N9+00W7+00	4.4	4.5	3.8	4.0	50322
N9+00W7+50	4.0	4.0	4.0	4.0	43263
N9+00W8+00	4.0	4.0	3.5	4.0	50294
N9+00W8+50	4.0	4.0	4.0	4.0	50373
N9+50W0+00	6.0	6.2	5.2	4.2	50344
N9+50W0+50	8.4	2.6	7.2	3.2	50232
N9+50W1+00	5.0	5.0	4.2	4.2	50325
N9+50W1+50	5.2	5.2	4.8	5.2	50291
N9+50W2+00	10.0	7.0	10.0	10.0	4762
N9+50W2+50	13.0	13.0	5.0	5.0	4889
N9+50W3+00	5.2	5.2	4.2	4.2	4805
N9+50W3+50	5.0	4.8	4.0	4.8	4799
N9+50W4+00	4.0	4.0	2.0	5.0	50342



SITE 3 GEOPHYSICAL SURVEY

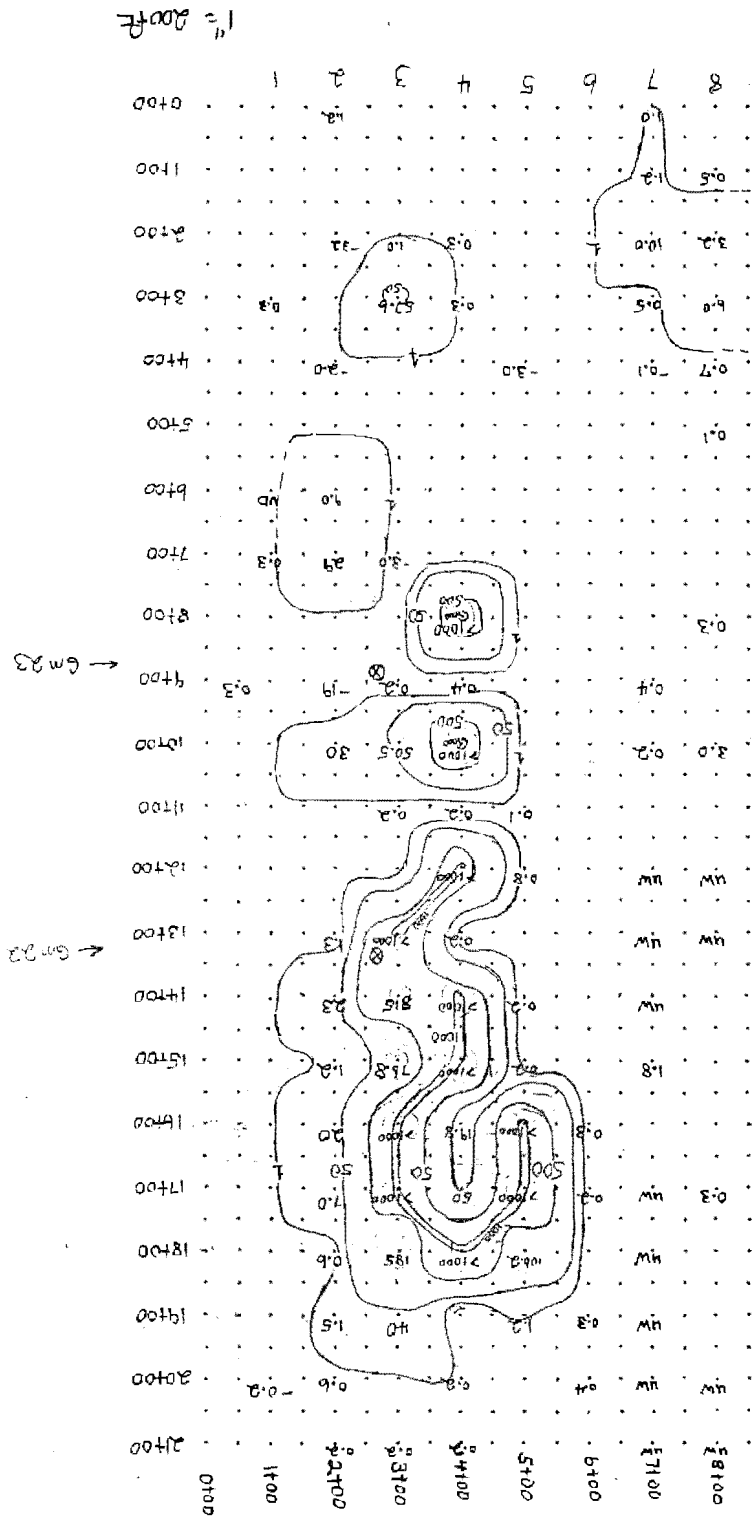
COORDINATE LOCATION	EM-31 VERT N-S (mmhos/m)	EM-31 VERT E-W (mmhos/m)	EM-31 HORZ N-S (mmhos/m)	EM-31 HORZ E-W (mmhos/m)	MAGNETOMETER (gammas)
N9+50W4+50	5.0	4.0	4.0	5.0	50308
N9+50W5+00	7.5	3.5	4.0	5.0	50547
N9+50W5+50	5.0	5.0	4.0	4.0	50381
N9+50W6+00	4.8	4.8	4.0	3.5	50352
N9+50W6+50	5.0	4.5	5.0	4.0	50451
N9+50W7+00	4.5	4.4	4.0	3.8	50329
N9+50W7+50	4.5	4.5	4.5	4.5	46768
N9+50W8+00	4.5	4.5	4.0	3.5	50327
N9+50W8+50	4.0	4.0	4.5	4.0	50365

Key:

NA = Not accessible.

**APPENDIX E**  
**SOIL HEADSPACE DATA**

E-1 SOIL HEADSPACE SURVEY MAP --  
NAS PENSACOLA SITE 3



contoured at:  
1, 50, 500, 1000 ppm  
NW - Under Water  
ND - no data  
7 - greater than  
no plotted value - 0.0 ppm detected

Soil headspace:  
unfiltered (ppm) - filtered (ppm) readings  
[non-methane organic vapor concentration]  
note: if [unfiltered-filtered] than value  
plotted will be 7.0



SITE 3 SOIL HEADSPACE SURVEY

COORDINATE LOCATION	DEPTH (feet)	OVA UNFILTERED (ppm)	OVA FILTERED (ppm)
N0+00W0+00	5.0	0.0	0.0
N0+00W1+00	5.0	0.0	0.0
N0+00W2+00	2.5	0.0	1.2
N0+00W3+00	3.5	0.0	0.0
N0+00W4+00	5.0	0.0	0.0
N0+00W5+00	5.0	0.0	0.0
N0+00W6+00	5.0	0.0	0.0
N0+00W7+00	3.0	1.0	0.0
N0+00W8+00	3.5	0.0	0.0
N1+00W0+00	5.0	0.0	0.0
N1+00W1+00	4.0	0.0	0.0
N1+00W2+00	1.0	0.0	0.0
N1+00W3+00	2.5	0.0	0.0
N1+00W4+00	4.5	0.0	0.0
N1+00W5+00	4.0	0.0	0.0
N1+00W6+00	4.5	0.0	0.0
N1+00W7+00	3.5	1.2	0.0
N1+00W8+00	3.0	0.5	0.0
N10+00W0+00	3.0	0.0	0.0
N10+00W1+00	1.0	0.0	0.0
N10+00W2+00	0.5	72	42
N10+00W3+00	2.0	51	0.5
N10+00W4+00	2.3	>1000	1.0
N10+00W5+00	2.1	0.0	0.0
N10+00W6+00	3.5	0.0	0.0
N10+00W7+00	2.0	0.2	0.0
N10+00W8+00	2.5	3.0	0.0
N11+00W0+00	3.5	0.0	0.0
N11+00W1+00	1.0	0.0	0.0
N11+00W2+00	1.0	0.7	0.7
N11+00W3+00	2.0	0.2	0.0
N11+00W4+00	1.8	0.4	0.2
N11+00W5+00	2.3	0.1	0.0
N11+00W6+00	1.0	0.0	0.0
N11+00W7+00	1.0	0.0	0.0
N11+00W8+00	1.0	0.0	0.0
N12+00W0+00	2.0	0.0	0.0
N12+00W1+00	2.0	0.0	0.0
N12+00W2+00	0.5	0.0	0.0
N12+00W3+00	1.4	0.0	0.0
N12+00W4+00	1.9	>1000	8.0
N12+00W5+00	1.7	0.8	0.0
N12+00W6+00	2.0	0.0	0.0
N12+00W7+00	NA	NA	NA
N12+00W8+00	NA	NA	NA

SITE 3 SOIL HEADSPACE SURVEY

COORDINATE LOCATION	DEPTH (feet)	OVA UNFILTERED (ppm)	OVA FILTERED (ppm)
N13+00W0+00	2.0	0.0	0.0
N13+00W1+00	1.5	0.0	0.0
N13+00W2+00	0.33	1.9	0.6
N13+00W3+00	1.25	>1000	3.0
N13+00W4+00	1.9	0.2	0.0
N13+00W5+00	1.8	0.0	0.0
N13+00W6+00	2.0	0.0	0.0
N13+00W7+00	NA	NA	NA
N13+00W8+00	NA	NA	NA
N14+00W0+00	2.0	0.0	0.0
N14+00W1+00	2.0	0.0	0.0
N14+00W2+00	0.33	99	76
N14+00W3+00	1.48	820	5.0
N14+00W4+00	1.6	>1000	2.0
N14+00W5+00	2.27	0.4	0.2
N14+00W6+00	1.0	0.0	0.0
N14+00W7+00	NA	NA	NA
N14+00W8+00	1.0	0.0	0.0
N15+00W0+00	2.0	0.0	0.0
N15+00W1+00	1.5	0.0	0.0
N15+00W2+00	0.33	5.4	4.2
N15+00W3+00	0.6	78	1.2
N15+00W4+00	1.9	>1000	3.0
N15+00W5+00	2.3	0.2	0.0
N15+00W6+00	1.5	0.0	0.0
N15+00W7+00	1.5	1.8	0.0
N15+00W8+00	1.2	0.0	0.0
N16+00W0+00	3.0	0.0	0.0
N16+00W1+00	1.5	0.0	0.0
N16+00W2+00	0.33	420	400
N16+00W3+00	1.1	>1000	7.0
N16+00W4+00	1.5	20	0.2
N16+00W5+00	2.5	>1000	0.2
N16+00W6+00	1.5	0.3	0.0
N16+00W7+00	1.0	0.0	0.0
N16+00W8+00	1.0	0.0	0.0
N17+00W0+00	3.0	0.0	0.0
N17+00W1+00	1.5	0.0	0.0
N17+00W2+00	0.33	19	12
N17+00W3+00	0.9	>1000	3.5
N17+00W4+00	1.1	350	300
N17+00W5+00	2.9	>1000	0.2
N17+00W6+00	1.5	0.0	0.0
N17+00W7+00	NA	NA	NA
N17+00W8+00	1.0	0.3	0.0

SITE 3 SOIL HEADSPACE SURVEY

COORDINATE LOCATION	DEPTH (feet)	OVA UNFILTERED (ppm)	OVA FILTERED (ppm)
N18+00W0+00	2.5	0.0	0.0
N18+00W1+00	1.5	0.0	0.0
N18+00W2+00	0.5	3.8	3.2
N18+00W3+00	0.5	220	35
N18+00W4+00	0.5	>1000	26
N18+00W5+00	1.8	110	3.8
N18+00W6+00	1.0	0.2	0.0
N18+00W7+00	NA	NA	NA
N18+00W8+00	1.0	0.0	0.0
N19+00W0+00	2.5	0.0	0.0
N19+00W1+00	1.5	0.0	0.0
N19+00W2+00	0.5	2.0	0.5
N19+00W3+00	0.63	65	25
N19+00W4+00	1.3	12	12
N19+00W5+00	1.6	6.2	5.0
N19+00W6+00	1.5	0.3	0.0
N19+00W7+00	NA	NA	NA
N19+00W8+00	NA	NA	NA
N2+00W0+00	5.0	0.0	0.0
N2+00W1+00	3.5	0.0	0.0
N2+00W2+00	1.0	20	52
N2+00W3+00	2.0	1.0	0.0
N2+00W4+00	3.0	0.3	0.0
N2+00W5+00	3.5	0.0	0.0
N2+00W6+00	4.5	0.0	0.0
N2+00W7+00	5.0	10.0	0.0
N2+00W8+00	5.0	3.2	0.0
N20+00W0+00	2.0	0.0	0.0
N20+00W1+00	1.4	0.0	0.2
N20+00W2+00	0.7	1.6	1.0
N20+00W3+00	0.6	0.0	0.0
N20+00W4+00	1.4	0.2	0.0
N20+00W5+00	1.6	0.0	0.0
N20+00W6+00	2.0	0.4	0.0
N20+00W7+00	NA	NA	NA
N20+00W8+00	NA	NA	NA
N21+00W0+00	3.0	1.2	2.2
N21+00W1+00	0.7	0.0	0.0
N21+00W2+00	0.9	0.4	0.2
N21+00W3+00	0.95	0.4	0.0
N21+00W4+00	1.05	0.4	0.2
N21+00W5+00	1.6	0.0	0.0
N21+00W6+00	1.5	0.0	0.0
N21+00W7+00	NA	NA	NA
N21+00W8+00	NA	NA	NA

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SITE 3 SOIL HEADSPACE SURVEY

COORDINATE LOCATION	DEPTH (feet)	OVA UNFILTERED (ppm)	OVA FILTERED (ppm)
N3+00W0+00	5.0	0.0	0.0
N3+00W1+00	2.0	0.3	0.0
N3+00W2+00	0.7	220	220
N3+00W3+00	2.5	58	0.4
N3+00W4+00	3.5	0.3	0.0
N3+00W5+00	2.5	0.0	0.0
N3+00W6+00	4.0	0.0	0.0
N3+00W7+00	4.5	0.5	0.0
N3+00W8+00	4.7	6.0	0.0
N4+00W0+00	4.0	0.0	0.0
N4+00W1+00	2.5	0.0	0.0
N4+00W2+00	1.0	95	98
N4+00W3+00	2.0	0.0	0.0
N4+00W4+00	3.5	0.0	0.0
N4+00W5+00	3.0	3.0	0.0
N4+00W6+00	4.5	0.0	0.0
N4+00W7+00	5.0	0.3	0.4
N4+00W8+00	5.0	0.7	0.0
N5+00W0+00	4.5	0.0	0.0
N5+00W1+00	2.0	0.0	0.0
N5+00W2+00	1.0	300	300
N5+00W3+00	2.0	0.0	0.0
N5+00W4+00	2.5	0.0	0.0
N5+00W5+00	3.0	0.0	0.0
N5+00W6+00	3.5	0.0	0.0
N5+00W7+00	3.0	0.0	0.0
N5+00W8+00	3.5	0.1	0.0
N6+00W0+00	3.5	0.0	0.0
N6+00W1+00	2.0	NR	NR
N6+00W2+00	1.0	19	10.0
N6+00W3+00	2.0	0.0	0.0
N6+00W4+00	2.5	0.0	0.0
N6+00W5+00	3.0	0.0	0.0
N6+00W6+00	2.5	0.0	0.0
N6+00W7+00	3.0	0.0	0.0
N6+00W8+00	3.0	0.0	0.0
N7+00W0+00	3.5	0.0	0.0
N7+00W1+00	1.5	0.3	0.0
N7+00W2+00	0.5	50	21
N7+00W3+00	2.0	19	22
N7+00W4+00	2.5	0.0	0.0
N7+00W5+00	3.0	0.0	0.0
N7+00W6+00	3.0	0.0	0.0
N7+00W7+00	2.5	0.0	0.0
N7+00W8+00	2.5	0.0	0.0

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SITE 3 SOIL HEADSPACE SURVEY

COORDINATE LOCATION	DEPTH (feet)	OVA UNFILTERED (ppm)	OVA FILTERED (ppm)
N8+00W0+00	3.0	0.0	0.0
N8+00W1+00	1.0	0.0	0.0
N8+00W2+00	0.5	10.0	10.0
N8+00W3+00	1.0	0.0	0.0
N8+00W4+00	3.8	>1000	4.0
N8+00W5+00	3.8	0.2	0.0
N8+00W6+00	3.8	0.0	0.0
N8+00W7+00	3.0	0.0	0.0
N8+00W8+00	2.5	0.3	0.0
N9+00W0+00	3.0	0.0	0.0
N9+00W1+00	1.0	0.5	0.2
N9+00W2+00	0.33	25	44
N9+00W3+00	2.0	0.2	0.0
N9+00W4+00	2.5	0.6	0.2
N9+00W5+00	2.5	0.0	0.0
N9+00W6+00	3.8	0.0	0.0
N9+00W7+00	2.5	0.4	0.0
N9+00W8+00	2.5	0.0	0.0

Key:

NA = Not accessible.

NR = Not recorded.



APPENDIX F  
TEMPORARY MONITORING WELL, SOIL BORING,  
AND LITHOLOGIC INFORMATION

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B001
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 2.3
- 8) Depth to water in borehole (BLS): 2.3
- 9) Highest open-borehole OVA/HNu reading (ppm): 0.5
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings
- 22) Comments:

---

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.7	Dark grey to black organic rich sand, coarse grained with roots and vegetation.
0.7- 2.3	Medium grey to tan sand, coarse grained. Wet at 2.3 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet.  
All boreholes are 4 inches in diameter. All well casings and screens  
are 2-inch-diameter; well screen slot sizes are .010 inches. No  
annular material (i.e. filter pack, seal or grout) was used in well  
installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B002
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/26/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 1.5
- 8) Depth to water in borehole (BLS): 1.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0.2
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1	Dark grey sand, medium to medium coarse grained. Abundant organic material and roots.
1- 1.5	Reddish brown to grey sand, peaty, fine to medium grained. Wet at 1.5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet.  
All boreholes are 4 inches in diameter. All well casings and screens  
are 2-inch-diameter; well screen slot sizes are .010 inches. No  
annular material (i.e. filter pack, seal or grout) was used in well  
installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B003
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/26/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 1.7
- 8) Depth to water in borehole (BLS): 1.7
- 9) Highest open-borehole OVA/HNu reading (ppm): 0.6
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.7	Dark grey, organic rich (peaty) sand, medium coarse grained. Wet at 1.7 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B004
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method:
- 5) Date drilled/installed: 07/24/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 4.5
- 8) Depth to water in borehole (BLS): 4.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.5	Pale tan sand, medium to medium coarse grained.
0.5- 3.8	Medium tan-yellow sand, medium-coarse grained.
3.8- 4.5	Pale tan-grey sand, coarse grained. Wet at 4.5 ft.

---

Notes: All depths, lengths, heights, and elevations are measured in feet.  
 All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B005
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/26/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 4.5
- 8) Depth to water in borehole (BLS): 4.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 3.5	Medium yellow-tan sand, medium coarse to coarse grained, roots in upper 4 inches.
3.5- 4.5	Pale grey sand coarse grained. Wet at 4.5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B006
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 6.5
- 8) Depth to water in borehole (BLS): 6.5
- 9) Highest open-borehole OVA/HNu reading (ppm): NA
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 5.5	Pale tan sand, medium-coarse grained with leaves and roots in upper 2 inches.
5.5- 6.5	Pale tan sand, medium to coarse grained. Wet at 6.5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B007
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 2.8
- 8) Depth to water in borehole (BLS): 2.8
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.5	Medium grey, organic rich sand, medium coarse grained with abundant vegetation and roots.
0.5- 1.5	Medium tan sand, medium coarse grained.
1.5- 2.8	Dark grey to black, soft silty, peaty sand, fine grained. Wet at 2.8 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing



# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B008
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/26/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 2.5
- 8) Depth to water in borehole (BLS): 2.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.3	Dark grey, organic rich sand, medium to coarse grained. Vegetation and roots present.
1.3- 2.0	Medium brown sand, medium coarse grained.
2.0- 2.5	Pale grey sand, coarse grained. Wet at 2.5 ft.

---

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B009
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/24/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 3.5
- 8) Depth to water in borehole (BLS): 3.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 2.0	Dark grey to black organic rich sand, medium coarse grained.
2.0- 2.3	Medium grey sand, coarse grained, some organic material.
2.3- 3.0	Light grey sand, medium coarse grained.
3.0- 3.5	Light grey with orange mottling, medium coarse grained. Wet at 3.5 ft.

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Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B010
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/24/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 3.7
- 8) Depth to water in borehole (BLS): 3.7
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.2	Pale tan to grey sand, medium to medium-coarse grained.
1.2- 3.0	Medium tan-yellow sand, medium-coarse grained.
3.0- 3.7	Pale grey sand, coarse grained. Wet at 3.7 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B011
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 5.5
- 8) Depth to water in borehole (BLS): 5.5
- 9) Highest open-borehole OVA/HNu reading (ppm): NA
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.2	Light grey sand, medium grained with some grass and roots.
0.2- 0.8	Light tan sand, medium grained.
0.8- 3.0	Medium tan sand, medium to coarse grained.
3.0- 5.5	Light tan to yellow sand, medium to coarse grained. Wet at 5.5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B012
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 2
- 8) Depth to water in borehole (BLS): 2
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.5	Dark grey, organic rich sand (humas), medium-coarse grained.
0.5- 1.5	Medium tan sand, medium to coarse grained.
1.5- 2.0	Pale grey sand, coarse grained. Wet at 2 ft.

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Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B013
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/24/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 2.7
- 8) Depth to water in borehole (BLS): 2.7
- 9) Highest open-borehole OVA/HNu reading (ppm): 170
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Petroleum odor noted while drilling. Boring in burn area.

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.2	Dark grey sand, medium coarse grained. Color due to burned materials (hydrocarbons).
0.2- 1.5	Medium brown sand, medium coarse grained. Petroleum odor noted at 1 foot BLS.
1.5- 2.7	Pale grey sand, coarse grained. Wet at 2.7 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B014
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/24/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 3
- 8) Depth to water in borehole (BLS): 3
- 9) Highest open-borehole OVA/HNu reading (ppm): 150
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Boring drilled in burn area, petroleum odors noted.

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.1	Dark grey sand, medium coarse grained.
0.1- 0.3	Medium grey-brown sand, medium to medium coarse grained.
0.3- 2.0	Medium tan sand, medium-coarse grained.
2.0- 3.0	Pale grey sand, coarse grained. Wet at 3 ft. Petroleum odor noted.

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Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B015
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 3.5
- 8) Depth to water in borehole (BLS): 3.5
- 9) Highest open-borehole OVA/HNu reading (ppm): NA
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Petroleum odor near water table.

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.1	Dark grey organic rich sand, fine to medium grained.
0.1- 1.5	Light tan to yellow sand, medium to medium-coarse grained.
1.5- 3.5	Pale cream-grey sand, coarse grained. Wet at 3.5 ft. Petroleum odor near water table.

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Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing



# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B016
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 2
- 8) Depth to water in borehole (BLS): 2
- 9) Highest open-borehole OVA/HNu reading (ppm): NA
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.5	Pale grey sand, medium to coarse grained.
1.5- 2.0	Pale cream sand with bright orange mottling, coarse grained. Wet at 2 ft.

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Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B017
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 0.7
- 8) Depth to water in borehole (BLS): 0.7
- 9) Highest open-borehole OVA/HNu reading (ppm): 12
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Petroleum odor noted while drilling.

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.7	Dark grey to black humus rich sand, coarse grained, abundant organic material and vegetation.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B018
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/26/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 0.7
- 8) Depth to water in borehole (BLS): 0.7
- 9) Highest open-borehole OVA/HNu reading (ppm): 150
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Strong petroleum odor noted during drilling. Sheen noted on water.

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.7	Dark grey to black organic rich sand, vegetation present. Strong petroleum odor noted. Wet at 0.7 ft. Sheen noted on water in borehole.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B019
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/26/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 0.7
- 8) Depth to water in borehole (BLS): 0.7
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.5	Dark grey to black organic rich sand, medium to coarse grained.
0.5- 0.7	Pale grey-tan sand, medium to medium coarse grained. Wet at 0.7 ft. Abundant vegetation present.

Notes: All depths, lengths, heights, and elevations are measured in feet.  
All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B020
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/24/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 0.67
- 8) Depth to water in borehole (BLS): 0.67
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.67	Dark grey to black organic rich sand, medium to medium coarse grained. Wet at 0.67 ft. Much vegetation present.

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Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B021
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 1
- 8) Depth to water in borehole (BLS): 1
- 9) Highest open-borehole OVA/HNu reading (ppm): NA
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Slight petroleum odor at water table.

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.5	Dark grey to black organic rich sand, medium to medium coarse grained with grass and roots.
0.5- 1.0	Light grey to tan sand, coarse grained. Wet at 1 foot, slight petroleum odor near water table.

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Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B022
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: HA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 5.5
- 8) Depth to water in borehole (BLS): 5.5
- 9) Highest open-borehole OVA/HNu reading (ppm): NA
- 10) Depth of well (BLS): NA
- 11) Length of well screen: NA
- 12) Length of casing (BLS): NA
- 13) Approx. height of casing above land surface: NA
- 14) Depth to water in well (BTOC): NA
- 15) Elevation of TOC: NA
- 16) Water level elevation: NA
- 17) Date groundwater sampled:
- 18) pH (units): NA
- 19) Temperature (degrees C): NA
- 20) Specific conductance (umhos/cm): NA
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.0	Light grey sand, fine to medium grained, dry with some grass and roots.
1.0- 1.5	Pale cream to tan sand, medium grained.
1.5- 5.0	Pale cream sand, coarse grained with orange mottling at 48 to 50 inches BLS.
5.0- 5.5	Pale cream and orange mottled sand, medium to coarse grained. Wet at 5.5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B023/P03TW023
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 4.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): 7.40
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 2.40
- 13) Approx. height of casing above land surface: 2.56
- 14) Depth to water in well (BTOC): 5.99
- 15) Elevation of TOC: 30.56
- 16) Water level elevation: 24.57
- 17) Date groundwater sampled: 07/25/91
- 18) pH (units): 5.9
- 19) Temperature (degrees C): 27
- 20) Specific conductance (umhos/cm): 137
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.0	Dark grey, organic rich sand, medium to medium coarse grained.
1.0- 2.3	Light tan sand, medium coarse grained.
2.3- 9.0	Pale grey sand, coarse grained. Wet at 4.5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing



# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B024/P03TW024
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/26/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 4
- 9) Highest open-borehole OVA/HNu reading (ppm): 170
- 10) Depth of well (BLS): 6.87
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 1.87
- 13) Approx. height of casing above land surface: 3.06
- 14) Depth to water in well (BTOC): 5.42
- 15) Elevation of TOC: 30.17
- 16) Water level elevation: 24.75
- 17) Date groundwater sampled: 07/26/91
- 18) pH (units): 5.9
- 19) Temperature (degrees C): 27
- 20) Specific conductance (umhos/cm): 159
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Boring/well in burn area. Free product noted in soil, sheen on water.

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.5	Dark grey to black sand, medium to coarse grained, appears stained from burned hydrocarbon residue. Soil saturated with free product. 1/4 inch plastic pit liner at 1.5 ft
1.5- 9.0	Dark grey to black sand, medium to coarse grained. Free product oozing out at 3 ft. Water at 4 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B025/P03TW025
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/26/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 3
- 9) Highest open-borehole OVA/HNu reading (ppm): 165
- 10) Depth of well (BLS): 6.81
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 1.81
- 13) Approx. height of casing above land surface: 3.14
- 14) Depth to water in well (BTOC): 5.30
- 15) Elevation of TOC: 30.10
- 16) Water level elevation: 24.80
- 17) Date groundwater sampled: 07/26/91
- 18) pH (units): 5.2
- 19) Temperature (degrees C): 29
- 20) Specific conductance (umhos/cm): 90
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Boring/well in burn area. Petroleum hydrocarbon odor present.

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.5	Dark grey sand, medium to coarse grained, color due to burned hydrocarbon residue. Petroleum odor present.
1.5- 9.0	Light grey sand, coarse grained. Wet at 3 ft. Petroleum odor present.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B026/P03TW026
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/24/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 3
- 9) Highest open-borehole OVA/HNu reading (ppm): 150
- 10) Depth of well (BLS): 7.05
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 2.05
- 13) Approx. height of casing above land surface: 2.85
- 14) Depth to water in well (BTOC): 6.12
- 15) Elevation of TOC: 30.69
- 16) Water level elevation: 24.57
- 17) Date groundwater sampled: 07/24/91
- 18) pH (units): 4.8
- 19) Temperature (degrees C): 28
- 20) Specific conductance (umhos/cm): 39
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Strong petroleum odor noted during drilling.

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## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 1.0	Pale grey sand, medium to coarse grained. Some grass and roots present.
1.0- 3.0	Medium tan sand, medium coarse grained. Wet at 3 ft. Strong petroleum odor noted.
3.0- 9	Pale grey sand, coarse grained.

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Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
 SSA = solid stem auger  
 HA = hand auger  
 NR = No Reading

BLS = below land surface  
 TOC = top of casing  
 BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B027/P03TW027
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/24/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 3.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 200
- 10) Depth of well (BLS): 8.23
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 3.23
- 13) Approx. height of casing above land surface: 2.47
- 14) Depth to water in well (BTOC): 5.30
- 15) Elevation of TOC: 29.64
- 16) Water level elevation: 24.34
- 17) Date groundwater sampled: 07/24/91
- 18) pH (units): 4.4
- 19) Temperature (degrees C): 28
- 20) Specific conductance (umhos/cm): 94
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments: Drilling in burn area. Sheen noted on water while drilling.

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.7	Dark grey sand, medium to coarse grained. Color due to burned material residue (hydrocarbons).
0.7- 3.5	Medium tan to grey sand, medium coarse grained. Wet at 3.5 ft. Petroleum odor noted.
3.5- 9.0	Pale grey sand, medium to medium-coarse grained.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B028/P03TW028
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 4
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): 7.91
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 2.91
- 13) Approx. height of casing above land surface: 1.98
- 14) Depth to water in well (BTOC): 5.75
- 15) Elevation of TOC: 29.47
- 16) Water level elevation: 23.72
- 17) Date groundwater sampled: 07/24/91
- 18) pH (units): 5.6
- 19) Temperature (degrees C): 27
- 20) Specific conductance (umhos/cm): 28
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- .25	Dark grey organic rich sand, medium to medium coarse grained.
.25- 3.0	Medium tan sand, medium coarse grained.
3.0- 9.0	Pale grey sand, medium coarse grained. Wet at 4 ft. Dark brown-grey at 7 to 7.5 ft., possible staining due to organics.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B029/P03TW029
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 4.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): 8.3
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 3.3
- 13) Approx. height of casing above land surface: 1.56
- 14) Depth to water in well (BTOC): 5.14
- 15) Elevation of TOC: 27.83
- 16) Water level elevation: 22.69
- 17) Date groundwater sampled: 07/24/91
- 18) pH (units): 5.3
- 19) Temperature (degrees C): 27
- 20) Specific conductance (umhos/cm): 32
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 4.5	Pale tan sand, medium coarse grained. Wet at 4.5 ft.
4.5- 9.0	Pale cream sand, coarse grained.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B030/P03TW030
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 5
- 9) Highest open-borehole OVA/HNu reading (ppm): 2
- 10) Depth of well (BLS): 8.14
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 3.14
- 13) Approx. height of casing above land surface: 1.72
- 14) Depth to water in well (BTOC): 5.15
- 15) Elevation of TOC: 29.42
- 16) Water level elevation: 24.27
- 17) Date groundwater sampled: 07/25/91
- 18) pH (units): 4.9
- 19) Temperature (degrees C): 27
- 20) Specific conductance (umhos/cm): 41
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.7	Dark grey-brown sand, medium to medium coarse grained with much organic material and vegetation.
0.7- 1.0	Medium reddish-brown sand, coarse grained.
1.0- 2.5	Medium brown sand, medium coarse grained.
2.5- 4.5	Medium grey to tan sand, medium coarse grained.
4.5- 9.0	Dark grey to black peaty sand (humus rich), sand is medium coarse to coarse grained. Wet at 5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B031/P03TW031
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): 7.45
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 2.45
- 13) Approx. height of casing above land surface: 2.38
- 14) Depth to water in well (BTOC): 5.47
- 15) Elevation of TOC: 29.98
- 16) Water level elevation: 24.51
- 17) Date groundwater sampled: 07/26/91
- 18) pH (units): 6.3
- 19) Temperature (degrees C): 28
- 20) Specific conductance (umhos/cm): 100
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.7	Dark greyish brown, organic rich sand, medium to medium coarse grained with much vegetation and roots.
0.7- 2.5	Medium tan to yellow sand, medium coarse grained.
2.5- 9.0	Pale grey sand, coarse grained.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing



# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B032/P03TW032
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): 8.19
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 3.19
- 13) Approx. height of casing above land surface: 2.35
- 14) Depth to water in well (BTOC): 5.32
- 15) Elevation of TOC: 29.71
- 16) Water level elevation: 24.39
- 17) Date groundwater sampled: 07/26/91
- 18) pH (units): 6.3
- 19) Temperature (degrees C): 27
- 20) Specific conductance (umhos/cm): 87
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.2	Dark grey to black, organic rich sand, medium coarse grained, much vegetation and roots.
0.2- 0.8	Reddish brown sand, coarse grained.
0.8- 2.0	Medium tan sand, medium to medium coarse grained.
2.0- 9.0	Pale grey sand, coarse grained. Wet at 5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B033/P03TW033
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/25/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 9
- 8) Depth to water in borehole (BLS): 5
- 9) Highest open-borehole OVA/HNu reading (ppm): 2.5
- 10) Depth of well (BLS): 7.52
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 2.52
- 13) Approx. height of casing above land surface: 2.24
- 14) Depth to water in well (BTOC): 5.22
- 15) Elevation of TOC: 29.38
- 16) Water level elevation: 24.16
- 17) Date groundwater sampled: 07/26/91
- 18) pH (units): 5.2
- 19) Temperature (degrees C): 28
- 20) Specific conductance (umhos/cm): 47
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.1	Dark grey organic rich sand, medium to medium coarse grained with much vegetation and roots.
0.1- 2.0	Tan and orange mottled sand, coarse grained.
2.0- 9.0	Pale grey sand, medium coarse to coarse grained. Wet at 5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

# SOIL BORING/TEMPORARY MONITORING WELL INFORMATION

- 1) Site no.: 03
- 2) Boring no./Well no.: P03B034/P03TW034
- 3) Drilling firm: Meister and Assoc.
- 4) Drilling method: SSA
- 5) Date drilled/installed: 07/23/91
- 6) Geologist: DAN FOSS
- 7) Depth of boring (BLS): 10
- 8) Depth to water in borehole (BLS): 5.5
- 9) Highest open-borehole OVA/HNu reading (ppm): 0
- 10) Depth of well (BLS): 8.24
- 11) Length of well screen: 5
- 12) Length of casing (BLS): 3.24
- 13) Approx. height of casing above land surface: 1.60
- 14) Depth to water in well (BTOC): 5.80
- 15) Elevation of TOC: 28.75
- 16) Water level elevation: 22.95
- 17) Date groundwater sampled: 07/24/91
- 18) pH (units): 5.7
- 19) Temperature (degrees C): 27
- 20) Specific conductance (umhos/cm): 56
- 21) Borehole/Well abandonment method: Backfilled with cuttings.
- 22) Comments:

## BOREHOLE LITHOLOGIC LOG

Sample Depth (BLS)	Sample Description
0- 0.7	Light grey organic rich sand, medium grained with some grass and roots in upper 6 inches.
0.7- 2.0	Medium tan sand, medium coarse grained.
2.0- 2.3	Medium tan-yellow sand, medium coarse grained.
2.3- 10.0	Pale grey sand, coarse grained. Wet at 5.5 ft.

Notes: All depths, lengths, heights, and elevations are measured in feet. All boreholes are 4 inches in diameter. All well casings and screens are 2-inch-diameter; well screen slot sizes are .010 inches. No annular material (i.e. filter pack, seal or grout) was used in well installation. Unless otherwise noted, all sand grains are quartz.

NA = not applicable  
SSA = solid stem auger  
HA = hand auger  
NR = No Reading

BLS = below land surface  
TOC = top of casing  
BTOC = below top of casing

APPENDIX G

SURFACE WATER SAMPLING  
ANALYTICAL SCREENING RESULTS

MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *ghahn*  
DATE: August 16, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.838  
CC: Lab File

Attached is the laboratory report of the analysis conducted on ten samples received at the Analytical Services Center on July 31, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/kr  
Enclosure

\*See CONCENTRATION RANGE on back of form.

VOA TEMP. AT  $-4^{\circ}\text{C}$  upon receipt - at LAB vs

802 Soil Lot # X0362013, QC# 10042C  
40ml VOC # 1123043 QC# 10354C  
Vogel amb. Lot # 1071061 QC# 10180C  
10 Amber Lot # 108206 110912 QC# 10320C  
12 poly Lot # 1148011 QC# 10834C

HCL Lot # 5587 KEGP  
HNO<sub>3</sub> Lot # 6623 KECB  
H<sub>2</sub>SO<sub>4</sub> Lot # 2876 KERL

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.: UH8030		Project Name: NASP Site 3		Project Manager: John Barksdale		<div style="text-align: center;">REMARKS</div>																			
Sample: (Signatures) <i>[Signature]</i>				Field Team Leader: Dan Fass																					
STATION NUMBER	DATE	TIME	SAMPLE TYPE			SAMPLE INFORMATION	STATION LOCATION	NUMBER OF CONTAINERS																	
			COMP	GRAB	AIR				EXPECTED COMPOUNDS (Concentration)*																
P03	SD003	7/30	13:5	X		Low	Outfall AA sediment	3	X	X	X	X	X												
P03	SD004	7/30	14:30	X		"	Catch basin AA3M sediment	3	X	X	X	X	X												
P03	SW003	7/30	13:5	X		Low	Catch basin AA3M Surface H <sub>2</sub> O	5	X	X	X	X	X												
P03	SW004	7/30	14:30	X		"	Outfall AA Surface H <sub>2</sub> O	5	X	X	X	X	X												
Relinquished By: (Signature) <i>[Signature]</i>		Date/Time: 7/30/91 1655		Received By: (Signature) <i>[Signature]</i>		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Ship Via: Fed. Ex.													
Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		BL/Airbill Number: 0776546993		Date: 7/30/91											
Relinquished By: (Signature) <i>[Signature]</i>		Date/Time: 7/31/91 0930		Received For Laboratory By: (Signature) <i>[Signature]</i>		Relinquished By: (Signature)		Date/Time:		Received For Laboratory By: (Signature)															

Distribution: Original Accompanies Shipment; Copy to Coordinator's Field File  
\*See CONCENTRATION RANGE on back of form.

LOW TEMP. AT 30C upon receipt at LAB us

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
-----	-----	----	-----	-----	-----
17411.01	P03-SD001	SPNPRG1	07/30/91		08/05/91
17411.02	P03-SD001	SPNTPH1	07/30/91		08/05/91
17411.03	P03-SD001	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17412.01	P03-SD002	SPNPRG1	07/30/91		08/05/91
17412.02	P03-SD002	SPNTPH1	07/30/91		08/05/91
17412.03	P03-SD002	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17413.01	P03-SD002 DUP	SPNPRG1	07/30/91		08/05/91
17413.02	P03-SD002 DUP	SPNTPH1	07/30/91		08/05/91
17413.03	P03-SD002 DUP	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17414.01	P03-SD003	SPNPRG1	07/30/91		08/05/91
17414.02	P03-SD003	SPNTPH1	07/30/91		08/05/91
17414.03	P03-SD003	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17415.01	P03-SD004	SPNPRG1	07/30/91		08/05/91
17415.02	P03-SD004	SPNTPH1	07/30/91		08/05/91
17415.03	P03-SD004	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17416.01	P03-SW001	WPNPRG1	07/30/91		08/02/91
17416.03	P03-SW001	WPNP&P1	07/30/91		08/01/91
		WPNPAH1	07/30/91		08/03/91
		WPNPHL1	07/30/91		08/06/91
17416.04	P03-SW001	WPNTPH1	07/30/91		08/01/91
17416.05	P03-SW001	WPNMET1	07/30/91		08/05/91
17417.01	P03-SW002	WPNPRG1	07/30/91		08/02/91
17417.03	P03-SW002	WPNP&P1	07/30/91		08/01/91
		WPNPAH1	07/30/91		08/03/91
		WPNPHL1	07/30/91		08/06/91
17417.04	P03-SW002	WPNTPH1	07/30/91		08/01/91
17417.05	P03-SW002	WPNMET1	07/30/91		08/05/91
17418.01	P03-SW002 DUP	WPNPRG1	07/30/91		08/02/91
17418.03	P03-SW002 DUP	WPNP&P1	07/30/91		08/01/91
		WPNPAH1	07/30/91		08/03/91
		WPNPHL1	07/30/91		08/06/91
17418.04	P03-SW002 DUP	WPNTPH1	07/30/91		08/01/91



JOB NUMBER : 9101.838

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
17418.05	P03-SW002 DUP	WPNMET1	07/30/91		08/05/91
17419.01	P03-SW003	WPNPRG1	07/30/91		08/02/91
17419.03	P03-SW003	WPNP&P1	07/30/91		08/01/91
		WPNPAH1	07/30/91		08/03/91
		WPNPHL1	07/30/91		08/06/91
17419.04	P03-SW003	WPNTPH1	07/30/91		08/01/91
17419.05	P03-SW003	WPNMET1	07/30/91		08/05/91
17420.01	P03-SW004	WPNPRG1	07/30/91		08/03/91
17420.03	P03-SW004	WPNP&P1	07/30/91		08/01/91
		WPNPAH1	07/30/91		08/03/91
		WPNPHL1	07/30/91		08/06/91
17420.04	P03-SW004	WPNTPH1	07/30/91		08/01/91
17420.05	P03-SW004	WPNMET1	07/30/91		08/05/91

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17416 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW001

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	67		10	UG/L
Zinc	48		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17417 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW002

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	26		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17418 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	10		10	UG/L
Zinc	64		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17419 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW003

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	ND		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17420 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW004

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	50		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF WATER SAMPLES

9101.838

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(ug/L)

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Parameter	E & E Laboratory No. 91- 17420	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
Arsenic		ND	ND	NC
Chromium		ND	ND	NC
Zinc		50	83	50
Lead		ND	ND	NC
Cadmium		ND	ND	NC
Nickel		ND	ND	NC
Copper		ND	ND	NC
Silver		ND	ND	NC

---

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.838

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(ug/L)					
<hr/>					
Parameter	E & E Laboratory No. 91- 17420	Original Value	Amount Added	Amount Determined	Percent Recovery
<hr/>					
Arsenic		ND	2000	1700	83
Chromium		ND	200	200	98
Zinc		50	500	480	87
Lead		ND	500	470	93
Cadmium		ND	50	45	90
Nickel		ND	500	480	97
Copper		ND	250	240	95
Silver		ND	50	48	96

---

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.



JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	86		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17416 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW001

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17417 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW002

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17418 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17419 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW003

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	3.0	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17420 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW004

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.838

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(mg/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
<hr/>					
T. Recoverable Petroleum Hydrocarbons					
	Batch QC	ND	2.2	2.0	95

---

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



TEST CODE : WPNPRG1

JOB NUMBER : 9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17416

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW001

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	21		10
Ethylbenzene	10		10
Total Xylenes	150		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17417

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW002

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : WPNPRG1

JOB NUMBER : 9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17418

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : WPNPRG1

JOB NUMBER : 9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17419

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW003

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	56		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	87		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17420

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW004

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
PERCENT RECOVERY AND RELATIVE PERCENT DIFFERENCE (RPD)  
OF WATER MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)  
(Sample # 17420)

9101.838

(ug/L)								
Parameter	Original Value	Amount Added		Amount Determined		Percent Recovery		
		MS	MSD	MS	MSD	MS	MSD	RPD
Benzene	ND	20	20	17	15	85	75	13
Toluene	ND	20	20	16	15	80	75	6.5
Ethyl Benzene	ND	20	20	16	14	80	70	13
1,2-Dichlorobenzene	ND	40	40	19	18	48	45	6.5
1,3-Dichlorobenzene	ND	40	40	31	28	78	70	11
1,4-Dichlorobenzene	ND	40	40	31	29	78	73	6.6
1,1-Dichloroethene	ND	20	20	22	21	110	105	4.7
Methylene Chloride	ND	20	20	20	20	100	100	0
Trans-1,2-Dichloroethene	ND	20	20	20	20	100	100	0
1,1-Dichloroethane	ND	20	20	20	19	100	95	5.1
1,1,1-Trichloroethane	ND	20	20	20	19	100	95	5.1
1,2-Dichloroethane	ND	20	20	24	22	120	110	8.7
Trichloroethene	ND	20	20	22	20	110	100	9.5
Tetrachloroethene	ND	20	20	21	19	105	95	10

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
 PERCENT RECOVERY OF WATER MATRIX SPIKE (MS)  
 (Sample # Blank Spike)

9101.838

(ug/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzene		ND	20	19	95
Toluene		ND	20	19	95
Ethyl Benzene		ND	20	17	85
1,2-Dichlorobenzene		ND	20	9	45
1,3-Dichlorobenzene		ND	20	14	70
1,4-Dichlorobenzene		ND	20	15	75
1,1-Dichloroethene		ND	20	35	175*
Methylene Chloride		ND	20	21	105
Trans-1,2-Dichloroethene		ND	20	21	105
1,1-Dichloroethane		ND	20	21	105
1,1,1-Trichloroethane		ND	20	21	105
1,2-Dichloroethane		ND	20	28	140
Trichloroethene		ND	20	25	125
Tetrachloroethene		ND	20	24	120

ND = NOT DETECTED

\* = HIGH COMPOUND RECOVERY DUE TO MATRIX INTERFERENCE

QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.838

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Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	17416	100
	17417	83
	17418	88
	17419	88
	17420	95
	Method Blank	100
1,4-Dichlorobutane	17416	110
	17417	103
	17418	104
	17419	100
	17420	93
	Method Blank	100

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TEST CODE :WPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17416

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW001

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17417

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW002

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PAH - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-17418 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PAH - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-17419 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW003

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17420

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW004

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.838

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene					
	17420 MS	ND	50	30	60

ND = NOT DETECTED

TEST CODE :WPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-17416 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW001

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17417

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW002

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17418

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	230	-	100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-17419 MATRIX: WATER  
SAMPLE ID CLIENT: PO3-SW003

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	140	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17420

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW004

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		100

-----

QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.838

( ug )

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
2,4,6-Trichlorophenol					
	17420 MS	ND	100	74	74

ND = NOT DETECTED

TEST CODE :WPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17416

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW001

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PEST./PCB UNITS : UG/L  
SAMPLE ID LAB : EE-91-17417 MATRIX: WATER  
SAMPLE ID CLIENT: P03-SW002

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17418

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17419

MATRIX: WATER

SAMPLE ID CLIENT: P03-SW003

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17420

MATRIX: WATER

SAMPLE ID CLIENT: PO3-SW004

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY:  
PERCENT RECOVERY OF WATER MATRIX SPIKE  
(Sample # 17420)

9101.838

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/L)				
Heptachlor	ND	2.0	1.32	66
Lindane	ND	2.0	1.98	99
Aldrin	ND	2.0	1.14	57
4,4'-DDT	ND	5.0	3.01	60
Dieldrin	ND	5.0	5.36	107
Endrin	ND	5.0	5.5	110
PCB-1254	ND	25.0	22.7	91

ND = NOT DETECTED

TEST CODE :WPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

**APPENDIX H**  
**SEDIMENT SAMPLING ANALYTICAL**  
**SCREENING RESULTS**

MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *starytla hahn*  
DATE: August 16, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.838  
CC: Lab File

Attached is the laboratory report of the analysis conducted on ten samples received at the Analytical Services Center on July 31, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/kr  
Enclosure





Ecology and environment, inc.

308 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14088, TEL. 718/684-8080  
International Specialists in the Environment

Job # 9101.838

8oz soil Jar Lot # X0362013, QC# 10042C  
4oz VOA Lot # 1123043, QC# 10354C  
12 gal amber Lot # 1071061 QC# 10180C  
12 amber Lot # 1109022 QC# 10820C  
12 POLY Lot # 1148011 QC# 10884C

HCL Lot # 5587 KEGP  
HNO<sub>3</sub> Lot # 6623 KECG  
H<sub>2</sub>SO<sub>4</sub> Lot # 2876 KERC

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.: <b>UH8030</b>		Project Name: <b>NASP Site 3</b>		Project Manager: <b>John Barksdale</b>		<div style="border: 1px solid black; padding: 5px;"> <p>Screening - VOCs Screening - PAHs + Phthalates Screening - Metals TRPA</p> </div>																			
Samplers: (Signatures) <b>Jeff B. Fudgel</b>				Field Team Leader: <b>Don Fass</b>												REMARKS									
STATION NUMBER	DATE	TIME	SAMPLE TYPE			SAMPLE INFORMATION	STATION LOCATION	NUMBER OF CONTAINERS																	
			COMP	GRAB	AIR				EXPECTED COMPOUNDS (Concentration)*																
03	SO001	7/30	0930		X		LOW	Catch basin LL/F sediment	3	X	X	X	X	X											
03	SP002	7/30	1200		X		"	outfall LL sediment	3	X	X	X	X	X											
03	SP002D	7/30	1200		X		"	" " " duplicate	3	X	X	X	X	X											
03																									
03																									
03	SW001	7/30	0930		X		LOW	Catch basin LL/F surface H <sub>2</sub> O	5	X	X	X	X	X											
03	SW002	7/30	1200		X		"	outfall LL surface H <sub>2</sub> O	5	X	X	X	X	X											
03	SW002D	7/30	1200		X		"	" " " " dupl.	5	X	X	X	X	X											
03																									
03																									
03																									
Relinquished By: (Signature) <b>Conf</b>		Date/Time: <b>7/30/91</b>		Received By: (Signature) <b>Fed Ex</b>		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Ship Via: <b>Fed. Ex.</b>													
Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		BL/Airbill Number: <b>0176546982</b>													
Relinquished By: (Signature) <b>Fed Ex</b>		Date/Time: <b>7-31-91</b>		Received For Laboratory By: (Signature) <b>Jim Jensen</b>		Relinquished By: (Signature)		Date/Time:		Received For Laboratory By: (Signature)		Date: <b>7/30/91</b>													

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

\*See CONCENTRATION RANGE on back of form.

VOA TEMP. AT -4°C upon receipt at LAB via

234058



Biology and environment, inc.

300 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/864-8080  
International Specialists in the Environment

Boz Soil Jan # X0362013, QC# 10042C  
40ml VOC Lo 123043, QC# 10354C  
Kgal amber Lot# 1071061 QC# 10180C  
12 amber Lot# 108206 110912, QC# 10320C  
12 poly Lot# 1148 011, QC# 10884C

HCL Lot# 5587 KEGP  
HNO<sub>3</sub> Lot# 6623 KECB  
H<sub>2</sub>SO<sub>4</sub> Lot# 2876 KERB

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.: UH8030		Project Name: NASP site 3		Project Manager: John Barksdale		<div style="display: flex; justify-content: space-between;"> <div> <p>STATION NUMBER</p> <p>DATE</p> <p>TIME</p> <p>SAMPLE TYPE</p> <p>COMP</p> <p>GRAB</p> <p>AIR</p> </div> <div> <p>SAMPLE INFORMATION</p> <p>EXPECTED COMPOUNDS (Concentration)*</p> </div> <div> <p>STATION LOCATION</p> </div> <div> <p>NUMBER OF CONTAINERS</p> </div> </div>										
Sample: (Signatures) <i>[Signature]</i>				Field Team Leader: Dan Fass												
P03	SP003	7/30	13:5		X		Low	Outfall AA sediment	3	X	X	X	X	X		
P03	SP004	7/30	14:30		X		"	catch basin AA3M sediment	3	X	X	X	X	X		
P03	SW003	7/30	13:5		X		Low	catch basin AA3M surface H <sub>2</sub> O	5	X	X	X	X	X		
P03	SW004	7/30	14:30		X		"	outfall AA surface H <sub>2</sub> O	5	X	X	X	X	X		
Relinquished By: (Signature) <i>[Signature]</i>		Date/Time: 7/30/91 1655		Received By: (Signature) <i>[Signature]</i>		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Ship Via: Fed. Ex.				
Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)						
Relinquished By: (Signature) <i>[Signature]</i>		Date/Time: 7/31/91 0930		Received For Laboratory By: (Signature) <i>[Signature]</i>		Relinquished By: (Signature)		Date/Time:		Received For Laboratory By: (Signature)		BL/Airbill Number: 0776546993		Date: 7/30/91		

Distribution: Original Accompanies Shipment; Copy to Coordinator, Field Eng.

\*See CONCENTRATION RANGE on back of form.

LOA TEMP. AT 30C upon receipt at LAB us

234065

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
-----	-----	----	-----	-----	-----
17411.01	P03-SD001	SPNPRG1	07/30/91		08/05/91
17411.02	P03-SD001	SPNTPH1	07/30/91		08/05/91
17411.03	P03-SD001	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17412.01	P03-SD002	SPNPRG1	07/30/91		08/05/91
17412.02	P03-SD002	SPNTPH1	07/30/91		08/05/91
17412.03	P03-SD002	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17413.01	P03-SD002 DUP	SPNPRG1	07/30/91		08/05/91
17413.02	P03-SD002 DUP	SPNTPH1	07/30/91		08/05/91
17413.03	P03-SD002 DUP	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17414.01	P03-SD003	SPNPRG1	07/30/91		08/05/91
17414.02	P03-SD003	SPNTPH1	07/30/91		08/05/91
17414.03	P03-SD003	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17415.01	P03-SD004	SPNPRG1	07/30/91		08/05/91
17415.02	P03-SD004	SPNTPH1	07/30/91		08/05/91
17415.03	P03-SD004	SPNMET1	07/30/91		08/05/91
		SPNP&P1	07/30/91		08/01/91
		SPNPAH1	07/30/91		08/03/91
		SPNPHL1	07/30/91		08/07/91
17416.01	P03-SW001	WPNPRG1	07/30/91		08/02/91
17416.03	P03-SW001	WPNP&P1	07/30/91		08/01/91
		WPNPAH1	07/30/91		08/03/91
		WPNPHL1	07/30/91		08/06/91
17416.04	P03-SW001	WPNTPH1	07/30/91		08/01/91
17416.05	P03-SW001	WPNMET1	07/30/91		08/05/91
17417.01	P03-SW002	WPNPRG1	07/30/91		08/02/91
17417.03	P03-SW002	WPNP&P1	07/30/91		08/01/91
		WPNPAH1	07/30/91		08/03/91
		WPNPHL1	07/30/91		08/06/91
17417.04	P03-SW002	WPNTPH1	07/30/91		08/01/91
17417.05	P03-SW002	WPNMET1	07/30/91		08/05/91
17418.01	P03-SW002 DUP	WPNPRG1	07/30/91		08/02/91
17418.03	P03-SW002 DUP	WPNP&P1	07/30/91		08/01/91
		WPNPAH1	07/30/91		08/03/91
		WPNPHL1	07/30/91		08/06/91
17418.04	P03-SW002 DUP	WPNTPH1	07/30/91		08/01/91

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17411

MATRIX: SOLID

SAMPLE ID CLIENT: P03-SD001

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.8		1.0	MG/KG
Zinc	4.0		2.0	MG/KG
Lead	13		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17412

MATRIX: SOLID

SAMPLE ID CLIENT: P03-SD002

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	18		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17413

MATRIX: SOLID

SAMPLE ID CLIENT: P03-SD002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	14		2.0	MG/KG
Lead	10		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17414

MATRIX: SOLID

SAMPLE ID CLIENT: P03-SD003

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	7.0		1.0	MG/KG
Zinc	32		2.0	MG/KG
Lead	180		4.0	MG/KG
Cadmium	1.4		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	31		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17415

MATRIX: SOLID

SAMPLE ID CLIENT: P03-SD004

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.3		1.0	MG/KG
Zinc	9.5		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOLID SAMPLES

9101.838

---

(mg/kg)

---

Parameter	E & E Laboratory No. 91- 17415	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
Arsenic		ND	ND	NC
Chromium		1.3	2.0	39
Zinc		9.5	3.9	84
Lead		ND	ND	NC
Cadmium		ND	ND	NC
Nickel		ND	ND	NC
Copper		ND	ND	NC
Silver		ND	ND	NC

---

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOLID SAMPLES

9101.838

(mg/kg)

Parameter	E & E Laboratory No. 91- 17415	Original Value	Amount Added	Amount Determined	Percent Recovery
Arsenic		ND	200	180	88
Chromium		1.3	20	23	110
Zinc		9.5	50	51	83
Lead		ND	50	49	97
Cadmium		ND	5.0	4.4	88
Nickel		ND	50	49	99
Copper		ND	25	26	103
Silver		ND	5.0	4.5	91

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : METHOD BLANK

MATRIX: SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17411 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-SD001

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	11	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17412 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-SD002

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17413 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-SD002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17414 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-SD003

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	770	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17415 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-SD004

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	9.7	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOLID SAMPLES

9101.838

---

(mg/kg)				
Parameter	E & E Laboratory No. 91-	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
T. Recoverable Petroleum Hydrocarbons				
	Batch QC	11	ND	NC

---

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOLID SAMPLES

9101.838

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(mg/kg)					
<hr/>					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
<hr/>					
T. Recoverable Petroleum Hydrocarbons					
	Batch QC	11	100	78	65
	Batch QC	30	100	110	83

---

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

TEST CODE :SPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17411

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD001

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	1600		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17412

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD002

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17413

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17414

MATRIX : SOLID

SAMPLE ID CLIENT: PO3-SD003

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	1200		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17415

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD004

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.838

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Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	17411	96
	17412	173*
	17413	159*
	17414	156*
	17415	163*
	Method Blank	100
1,4-Dichlorobutane	17411	86
	17412	105
	17413	96
	17414	95
	17415	86
	Method Blank	100

---

\* = High surrogate recovery due to matrix interference.



TEST CODE :SPNPRG1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17411

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD001

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	1700	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17412

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD002

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17413

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17414

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD003

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	PRESENT	L	1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17415

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD004

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	PRESENT	L	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.838

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene					
	17415 MS	ND	50	45	90

TEST CODE :SPNPAH1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17411

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD001

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17412

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD002

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	5300	-	2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17413

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	3700	-	2000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17414

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD003

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	21000		2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17415

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD004

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----

QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.838

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
2,4,6-Trichlorophenol					
	Blank Spike	ND	100	72	72

ND = NOT DETECTED

TEST CODE :SPNPHL1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17411

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD001

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17412

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD002

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17413

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD002 DUP

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND	-	1000
Lindane	ND	-	1000
Aldrin	ND	-	1000
4,4 - DDT	ND	-	1000
Dieldrin	ND	-	1000
Endrin	ND	-	1000
Chlordane	ND	-	1000
4,4-DDE	ND	-	1000
Total PCBs	ND	-	5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17414

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD003

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17415

MATRIX : SOLID

SAMPLE ID CLIENT: P03-SD004

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY:  
PERCENT RECOVERY OF SOIL MATRIX SPIKE  
(Sample # 17415)

9101.838

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/kg)				
Heptachlor	ND	400	288	72
Lindane	ND	400	428	107
Aldrin	ND	400	245	61
4,4'-DDT	ND	1000	552	55
Dieldrin	ND	1000	1032	103
Endrin	ND	1000	1090	109
PCB-1254	ND	5000	3270	65

ND = NOT DETECTED

TEST CODE :SPNP&P1

JOB NUMBER :9101.838

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

APPENDIX I  
SOIL SAMPLING  
ANALYTICAL SCREENING RESULTS

MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *Gary Hahn*  
DATE: August 13, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.780  
CC: Lab File

Attached is the laboratory report of the analysis conducted on nine samples received at the Analytical Services Center on July 24, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/emc  
Enclosure



MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *GH/jp*  
DATE: August 12, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.792  
CC: Lab File

Attached is the laboratory report of the analysis conducted on fifteen samples received at the Analytical Services Center on July 25, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/jp  
Enclosure

MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *Gary Hahn*  
DATE: August 9, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.807  
CC: Lab File

Attached is the laboratory report of the analysis conducted on eleven samples received at the Analytical Services Center on July 26, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/kr  
Enclosure

MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *Gary Hahn*  
DATE: August 12, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.824  
CC: Lab File

Attached is the laboratory report of the analysis conducted on fourteen samples received at the Analytical Services Center on July 27, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/kr  
Enclosure



Ecology and environment, inc.

308 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/684-8080  
International Specialists in the Environment

Job # 9101.780

Sample Range 16 778-16 786 40 ml VOA Lot # 1123043 QCT# 10354C

802 Soil Jar Lot # X036013 QCT# 10042C

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.: U118030		Project Name: NASP Site 3		Project Manager: John Barksdale		REMARKS								
Samplers: (Signatures) <i>[Signature]</i>		Field Team Leader: Don Foss												
STATION NUMBER	DATE	TIME	SAMPLE TYPE			SAMPLE INFORMATION	STATION LOCATION	NUMBER OF CONTAINERS	SCREENING PARAMETERS					REMARKS
			COMP	GRAB	AIR				EXPECTED COMPOUNDS (Concentration)*	SCREENING PARAMETERS	SCREENING PARAMETERS	SCREENING PARAMETERS	SCREENING PARAMETERS	
P03	SO16A	7/23	0930	X		LOW	Soil Boring 016	3	X	X	X	X	X	
P03	SO22A	7/23	1000	X		"	" " 022	3	X	X	X	X	X	
P03	SO21A	7/23	1035	X		"	" " 021	3	X	X	X	X	X	
P03	SO15A	7/23	1050	X		"	" " 015	3	X	X	X	X	X	
P03	SO11A	7/23	1115	X		"	" " 011	3	X	X	X	X	X	
P03	SO06A	7/23	1140	X		"	" " 006	3	X	X	X	X	X	
P03	SO29A	7/23	1545	X		"	" " 029	3	X	X	X	X	X	
P03	SO28A	7/23	1615	X		"	" " 028	3	X	X	X	X	X	
P03	SO34A	7/23	1655	X		"	" " 034	3	X	X	X	X	X	
Relinquished By: (Signature) <i>[Signature]</i> Date/Time: 7/23/91 Received By: (Signature) <i>[Signature]</i> Date/Time: 7/24/91														
Relinquished By: (Signature) <i>[Signature]</i> Date/Time: 7/24/91 Received By: (Signature) <i>[Signature]</i> Date/Time: 7/24/91														
Relinquished By: (Signature) <i>[Signature]</i> Date/Time: 7/24/91 Received By: (Signature) <i>[Signature]</i> Date/Time: 7/24/91														
Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files														

\* See CONCENTRATION RANGE on back of form.

\* EXTRA Container included For TEMPERATURE 30°C

234055

802 Soil Jar Lot # X0362013, QC# 10042C  
40ml VOA Lot # 1123043, QC# 10354C

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No: <b>U18030</b>		Project Name: <b>NASP Site 3</b>		Project Manager: <b>John Barksdale</b>		<div style="text-align: center;"> <p>Screening VOCs Screening PAHs + PCBs Screening Residuals + PCBs Screening metals TRP-16</p> </div>																			
Sampler (Signature): <i>Jeff B. Fuyard</i>				Field Team Leader: <b>Dean Fass</b>												REMARKS									
STATION NUMBER	DATE	TIME	SAMPLE TYPE		SAMPLE INFORMATION											STATION LOCATION	NUMBER OF CONTAINERS								
	1991		COMP	GRAB	AIR	EXPECTED COMPOUNDS (Concentration)*																			
P03	S027A	7/24	0945	X		LOW	Soil Boring 027	3	X	X	X	X	X												
P03	S026A	7/24	1025	X		"	" " 026	3	X	X	X	X	X												
P03	S013A	7/24	1100	X		"	" " 013	3	X	X	X	X	X												
P03	S013AD	7/24	1100	X		"	" " 013 Duplicate	3	X	X	X	X	X		Duplicate soil sample										
P03	S009A	7/24	1150	X		"	" " 009	3	X	X	X	X	X												
P03	S014A	7/24	1350	X		"	" " 014	3	X	X	X	X	X												
P03	S020A	7/24	1420	X		"	" " 020	3	X	X	X	X	X												
P03	S010A	7/24	1445	X		"	" " 010	3	X	X	X	X	X												
P03	S004A	7/24	1515	X		"	" " 004	3	X	X	X	X	X												
Relinquished By (Signature): <i>Dean Fass</i>		Date/Time: 7/24/91 1630		Received By (Signature):		Relinquished By (Signature):		Date/Time:		Received By (Signature):		Ship Via: Fed. Ex.													
Relinquished By (Signature):		Date/Time:		Received By (Signature):		Relinquished By (Signature):		Date/Time:		Received By (Signature):															
Relinquished By (Signature): Fed. Ex. #1		Date/Time: 7-25-91/0910		Received For Laboratory By (Signature): <i>William H. Howard</i>		Relinquished By (Signature):		Date/Time:		Received For Laboratory By (Signature):		BL/Airbill Number: 0716546831		Date: 7/24/91											

Distribution: Original Accompanies Shipment, Copy to Coordinator Field Files  
\*See CONCENTRATION RANGE on back of form

Temp VOA was at 3°C  
upon receipt at LAB vs.



8oz Soil Jar Lot # X0362013, QC# 10042C  
40ml VOA Lot # 1123043, QC# 10354C

Page 1 of 1

Distribution: Original Accompanies Shipment, Copy to Coordinator Field Files  
\* See CONCENTRATION RANGE on back of form.

Temp. VOA at 3°C upon receipt at lab 15

234055

802 Soil Jar Lot # X0362013, QC# 10042C  
40 ml VOA Lot # 1123043, QC# 10354C

9101824

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.: <b>WH8030</b>		Project Name: <b>NHSP site 3</b>		Project Manager: <b>John Barksdale</b>		<div style="text-align: center;">REMARKS</div> <div style="position: absolute; top: 0; right: 0; transform: rotate(-45deg); font-size: small;">             Screening VOA's              Screening PAH's + PCB's              Screening PCB's + PAH's              TRP's           </div>														
Samplers: (Signatures) <i>Jeff B. Lumped</i>				Field Team Leader: <b>Dan Foss</b>																
STATION NUMBER		DATE	TIME	SAMPLE TYPE COMP GRAB AIR	SAMPLE INFORMATION EXPECTED COMPOUNDS (Concentration)*											STATION LOCATION	NUMBER OF CONTAINERS			
P03	S018A	7/26	0915	X		LOW	17302 Soil Boring 018	3	X	X	X	X	X	X						
P03	S019A	7/26	0945	X		"	" " 019	3	X	X	X	X	X	X						
P03	S009A	7/26	1010	X		"	" " 008	3	X	X	X	X	X	X						
P03	S003A	7/26	1050	X		"	" " 003	3	X	X	X	X	X	X						
P02	S002A	7/26	1040	X		"	" " 002	3	X	X	X	X	X	X						
P03	S005A	7/26	1120	X		"	" " 005	3	X	X	X	X	X	X						
P03	S024A	7/26	1420	X		High	" " 024	3	X	X	X	X	X	X						
P03	S025A	7/26	1500	X		LOW	" " 025	3	X	X	X	X	X	X						
P03	S025AD	7/26	1500	X		LOW	" " 025 duplicate	3	X	X	X	X	X	X						duplicate sample
Relinquished By: (Signature) <i>[Signature]</i>		Date/Time: 7/26/91		Received By: (Signature) <b>FED. EXP.</b>		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Ship Via: <b>Fed. Ex.</b>								
Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		BL/Airbill Number: <b>0176546960</b>								
Relinquished By: (Signature) <b>FED. EXP.</b>		Date/Time: 945		Received For Laboratory By: (Signature) <i>R. Marsh</i>		Relinquished By: (Signature)		Date/Time:		Received For Laboratory By: (Signature)		Date: <b>7/26/91</b>								

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

\* See CONCENTRATION RANGE on back of form.

234056

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
16778.01	P03-S006A	SPNPRG1	07/23/91		07/31/91
16778.02	P03-S006A	SPNTPH1	07/23/91		08/02/91
16778.03	P03-S006A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91
		SPNPHL1	07/23/91		07/30/91
16779.01	P03-S011A	SPNPRG1	07/23/91		07/31/91
16779.02	P03-S011A	SPNTPH1	07/23/91		08/02/91
16779.03	P03-S011A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91
		SPNPHL1	07/23/91		07/30/91
16780.01	P03-S015A	SPNPRG1	07/23/91		07/31/91
16780.02	P03-S015A	SPNTPH1	07/23/91		08/02/91
16780.03	P03-S015A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91
		SPNPHL1	07/23/91		07/30/91
16781.01	P03-S016A	SPNPRG1	07/23/91		07/31/91
16781.02	P03-S016A	SPNTPH1	07/23/91		08/02/91
16781.03	P03-S016A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91
		SPNPHL1	07/23/91		07/30/91
16782.01	P03-S021A	SPNPRG1	07/23/91		07/31/91
16782.02	P03-S021A	SPNTPH1	07/23/91		08/02/91
16782.03	P03-S021A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91
		SPNPHL1	07/23/91		07/30/91
16783.01	P03-S022A	SPNPRG1	07/23/91		07/31/91
16783.02	P03-S022A	SPNTPH1	07/23/91		08/02/91
16783.03	P03-S022A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91
		SPNPHL1	07/23/91		07/30/91
16784.01	P03-S028A	SPNPRG1	07/23/91		07/31/91
16784.02	P03-S028A	SPNTPH1	07/23/91		08/02/91
16784.03	P03-S028A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91
		SPNPHL1	07/23/91		07/30/91
16785.01	P03-S029A	SPNPRG1	07/23/91		08/01/91
16785.02	P03-S029A	SPNTPH1	07/23/91		08/02/91
16785.03	P03-S029A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91



JOB NUMBER : 9101.780

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
-----	-----	----	-----	-----	-----
16785.03	P03-S029A	SPNPHL1	07/23/91		07/30/91
16786.01	P03-S034A	SPNPRG1	07/23/91		08/01/91
16786.02	P03-S034A	SPNTPH1	07/23/91		08/05/91
16786.03	P03-S034A	SPNMET1	07/23/91		07/29/91
		SPNP&P1	07/23/91		07/30/91
		SPNPAH1	07/23/91		08/01/91
		SPNPHL1	07/23/91		07/30/91

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
-----	-----	----	-----	-----	-----
16959.01	P03-GW026	WPNPRG1	07/24/91		07/31/91
16959.03	P03-GW026	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16959.04	P03-GW026	WPNTPH1	07/24/91		08/01/91
16959.05	P03-GW026	WPNMET1	07/24/91		07/28/91
16960.01	P03-GW027	WPNPRG1	07/24/91		07/31/91
16960.03	P03-GW027	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16960.04	P03-GW027	WPNTPH1	07/24/91		08/01/91
16960.05	P03-GW027	WPNMET1	07/24/91		07/28/91
16961.01	P03-GW027-DUP.	WPNPRG1	07/24/91		07/31/91
16961.03	P03-GW027-DUP.	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16961.04	P03-GW027-DUP.	WPNTPH1	07/24/91		08/01/91
16961.05	P03-GW027-DUP.	WPNMET1	07/24/91		07/28/91
16962.01	P03-GW028	WPNPRG1	07/24/91		07/31/91
16962.03	P03-GW028	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16962.04	P03-GW028	WPNTPH1	07/24/91		08/01/91
16962.05	P03-GW028	WPNMET1	07/24/91		07/28/91
16963.01	P03-GW029	WPNPRG1	07/24/91		07/31/91
16963.03	P03-GW029	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16963.04	P03-GW029	WPNTPH1	07/24/91		08/01/91
16963.05	P03-GW029	WPNMET1	07/24/91		07/28/91
16964.01	P03-GW034	WPNPRG1	07/24/91		07/31/91
16964.03	P03-GW034	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16964.04	P03-GW034	WPNTPH1	07/24/91		08/01/91
16964.05	P03-GW034	WPNMET1	07/24/91		07/28/91
16965.01	P03-S004A	SPNPRG1	07/24/91		08/01/91
16965.02	P03-S004A	SPNTPH1	07/24/91		08/05/91
16965.03	P03-S004A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/30/91
		SPNPAH1	07/24/91		08/01/91
		SPNPHL1	07/24/91		07/31/91
16966.01	P03-S009A	SPNPRG1	07/24/91		08/01/91
16966.02	P03-S009A	SPNTPH1	07/24/91		08/05/91
16966.03	P03-S009A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/30/91
		SPNPAH1	07/24/91		08/01/91

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
-----	-----	----	-----	-----	-----
16966.03	P03-S009A	SPNPHL1	07/24/91		07/31/91
16967.01	P03-S010A	SPNPRG1	07/24/91		08/01/91
16967.02	P03-S010A	SPNTPH1	07/24/91		08/05/91
16967.03	P03-S010A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/30/91
		SPNPAH1	07/24/91		08/01/91
		SPNPHL1	07/24/91		07/31/91
16968.01	P03-S013A	SPNPRG1	07/24/91		08/03/91
16968.02	P03-S013A	SPNTPH1	07/24/91		08/05/91
16968.03	P03-S013A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/30/91
		SPNPAH1	07/24/91		08/01/91
		SPNPHL1	07/24/91		07/31/91
16969.01	P03-S013A-DUP.	SPNPRG1	07/24/91		08/03/91
16969.02	P03-S013A-DUP.	SPNTPH1	07/24/91		08/05/91
16969.03	P03-S013A-DUP.	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/31/91
		SPNPAH1	07/24/91		08/02/91
		SPNPHL1	07/24/91		07/31/91
16970.01	P03-S014A	SPNPRG1	07/24/91		08/05/91
16970.02	P03-S014A	SPNTPH1	07/24/91		08/05/91
16970.03	P03-S014A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/31/91
		SPNPAH1	07/24/91		08/02/91
		SPNPHL1	07/24/91		07/31/91
16971.01	P03-S020A	SPNPRG1	07/24/91		08/01/91
16971.02	P03-S020A	SPNTPH1	07/24/91		08/05/91
16971.03	P03-S020A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/31/91
		SPNPAH1	07/24/91		08/02/91
		SPNPHL1	07/24/91		07/31/91
16972.01	P03-S026A	SPNPRG1	07/24/91		08/03/91
16972.02	P03-S026A	SPNTPH1	07/24/91		08/05/91
16972.03	P03-S026A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/31/91
		SPNPAH1	07/24/91		08/02/91
		SPNPHL1	07/24/91		07/31/91
16973.01	P03-S027A	SPNPRG1	07/24/91		08/05/91
16973.02	P03-S027A	SPNTPH1	07/24/91		08/05/91
16973.03	P03-S027A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/31/91
		SPNPAH1	07/24/91		08/02/91
		SPNPHL1	07/24/91		07/31/91

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
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17066.01	P03-GW023	WPNPRG1	07/25/91		07/31/91
17066.03	P03-GW023	WPNP&P1	07/25/91		07/31/91
		WPNPAH1	07/25/91		08/02/91
		WPNPHL1	07/25/91		08/02/91
17066.04	P03-GW023	WPNTPH1	07/25/91		07/30/91
17066.05	P03-GW023	WPNMET1	07/25/91		07/31/91
17067.01	P03-GW030	WPNPRG1	07/25/91		07/31/91
17067.03	P03-GW030	WPNP&P1	07/25/91		07/31/91
		WPNPAH1	07/25/91		08/02/91
		WPNPHL1	07/25/91		08/02/91
17067.04	P03-GW030	WPNTPH1	07/25/91		07/30/91
17067.05	P03-GW030	WPNMET1	07/25/91		07/31/91
17068.01	P03-S001A	SPNPRG1	07/25/91		08/01/91
17068.02	P03-S001A	SPNTPH1	07/25/91		07/29/91
17068.03	P03-S001A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/02/91
17069.01	P03-S007A	SPNPRG1	07/25/91		08/02/91
17069.02	P03-S007A	SPNTPH1	07/25/91		07/29/91
17069.03	P03-S007A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17070.01	P03-S012A	SPNPRG1	07/25/91		08/02/91
17070.02	P03-S012A	SPNTPH1	07/25/91		07/29/91
17070.03	P03-S012A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17071.01	P03-S017A	SPNPRG1	07/25/91		08/02/91
17071.02	P03-S017A	SPNTPH1	07/25/91		07/29/91
17071.03	P03-S017A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17072.01	P03-S023A	SPNPRG1	07/25/91		08/02/91
17072.02	P03-S023A	SPNTPH1	07/25/91		07/29/91
17072.03	P03-S023A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17073.01	P03-S030A	SPNPRG1	07/25/91		08/02/91
17073.02	P03-S030A	SPNTPH1	07/25/91		07/29/91
17073.03	P03-S030A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
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17073.03	P03-S030A	SPNPHL1	07/25/91		08/03/91
17074.01	P03-S031A	SPNPRG1	07/25/91		08/02/91
17074.02	P03-S031A	SPNTPH1	07/25/91		07/29/91
17074.03	P03-S031A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17075.01	P03-S032A	SPNPRG1	07/25/91		08/02/91
17075.02	P03-S032A	SPNTPH1	07/25/91		07/29/91
17075.03	P03-S032A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17076.01	P03-S033A	SPNPRG1	07/25/91		08/02/91
17076.02	P03-S033A	SPNTPH1	07/25/91		07/29/91
17076.03	P03-S033A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
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17297.01	P03GW024	WPNPRG1	07/26/91		08/02/91
17297.03	P03GW024	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17297.04	P03GW024	WPNTPH1	07/26/91		07/30/91
17297.05	P03GW024	WPNMET1	07/26/91		07/31/91
17298.01	P03GW021	WPNPRG1	07/26/91		08/06/91
17298.03	P03GW021	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17298.04	P03GW021	WPNTPH1	07/26/91		07/30/91
17298.05	P03GW021	WPNMET1	07/26/91		07/31/91
17299.01	P03GW033	WPNPRG1	07/26/91		08/02/91
17299.03	P03GW033	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17299.04	P03GW033	WPNTPH1	07/26/91		07/30/91
17299.05	P03GW033	WPNMET1	07/26/91		07/31/91
17300.01	P03GW032	WPNPRG1	07/26/91		08/02/91
17300.03	P03GW032	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17300.04	P03GW032	WPNTPH1	07/26/91		07/30/91
17300.05	P03GW032	WPNMET1	07/26/91		07/31/91
17301.01	P03GW031	WPNPRG1	07/26/91		08/02/91
17301.03	P03GW031	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17301.04	P03GW031	WPNTPH1	07/26/91		08/01/91
17301.05	P03GW031	WPNMET1	07/26/91		07/31/91
17302.01	P03S018A	SPNPRG1	07/26/91		08/02/91
17302.02	P03S018A	SPNTPH1	07/26/91		07/30/91
17302.03	P03S018A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17303.01	P03S019A	SPNPRG1	07/26/91		08/02/91
17303.02	P03S019A	SPNTPH1	07/26/91		07/30/91
17303.03	P03S019A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17304.01	P03S008A	SPNPRG1	07/26/91		08/02/91
17304.02	P03S008A	SPNTPH1	07/26/91		07/30/91
17304.03	P03S008A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
-----	-----	-----	-----	-----	-----
17304.03	P03S008A	SPNPHL1	07/26/91		08/06/91
17305.01	P03S003A	SPNPRG1	07/26/91		08/02/91
17305.02	P03S003A	SPNTPH1	07/26/91		07/30/91
17305.03	P03S003A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17306.01	P03S002A	SPNPRG1	07/26/91		08/02/91
17306.02	P03S002A	SPNTPH1	07/26/91		07/30/91
17306.03	P03S002A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17307.01	P03S005A	SPNPRG1	07/26/91		08/02/91
17307.02	P03S005A	SPNTPH1	07/26/91		07/30/91
17307.03	P03S005A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17308.01	P03S024A	SPNPRG1	07/26/91		08/05/91
17308.02	P03S024A	SPNTPH1	07/26/91		07/30/91
17308.03	P03S024A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17309.01	P03S025A	SPNPRG1	07/26/91		08/02/91
17309.02	P03S025A	SPNTPH1	07/26/91		07/30/91
17309.03	P03S025A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17310.01	P03S025AD	SPNPRG1	07/26/91		08/02/91
17310.02	P03S025AD	SPNTPH1	07/26/91		07/31/91
17310.03	P03S025AD	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17068

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S001A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE



JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17306

MATRIX: SOLID

SAMPLE ID CLIENT: P03S002A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.3		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17305

MATRIX: SOLID

SAMPLE ID CLIENT: P03S003A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.4		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

## RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16965

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S004A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.2		1.0	MG/KG
Zinc	2.5		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17307

MATRIX: SOLID

SAMPLE ID CLIENT: P03S005A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.0		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

## RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16778

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S006A

## SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17069

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S007A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	2.1		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	6.1		4.0	MG/KG
Cadmium	0.53		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17304

MATRIX: SOLID

SAMPLE ID CLIENT: P03S008A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16966

MATRIX: SOLID

SAMPLE ID CLIENT: PO3-S009A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	2.0		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16967

MATRIX: SOLID

SAMPLE ID CLIENT: PO3-S010A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	2.9		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16779

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S011A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	3.1		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17070

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S012A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16968

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S013A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.1		1.0	MG/KG
Zinc	5.7		2.0	MG/KG
Lead	13		4.0	MG/KG
Cadmium	0.57		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	9.7		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16969

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S013A-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	9.3		2.0	MG/KG
Lead	22		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	25		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

## RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16970

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S014A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	9.2		2.0	MG/KG
Lead	27		4.0	MG/KG
Cadmium	0.66		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

## RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16780

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S015A

## SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	3.0		2.0	MG/KG
Lead	9.4		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16781

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S016A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17071

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S017A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.8		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	10		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17302

MATRIX: SOLID

SAMPLE ID CLIENT: P03S018A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	2.3		1.0	MG/KG
Zinc	13		2.0	MG/KG
Lead	71		4.0	MG/KG
Cadmium	0.82		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	21		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17303

MATRIX: SOLID

SAMPLE ID CLIENT: PO3S019A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.0		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16971

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S020A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.6		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

## RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16782

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S021A

## SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.3		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	15		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

## RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16783

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S022A

## SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	6.2		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17072

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S023A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17308

MATRIX: SOLID

SAMPLE ID CLIENT: P03S024A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.5		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	22		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17309

MATRIX: SOLID

SAMPLE ID CLIENT: P03S025A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	7.0		2.0	MG/KG
Lead	23		4.0	MG/KG
Cadmium	0.77		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	13		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17310

MATRIX: SOLID

SAMPLE ID CLIENT: P03S025AD

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	6.7		2.0	MG/KG
Lead	15		4.0	MG/KG
Cadmium	0.74		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	8.5		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

## RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16972

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S026A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	2.0		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16973

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S027A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	1.0		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	14		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

## RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16784

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S028A

## SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16785

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S029A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17073

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S030A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17074

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S031A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

NA = NOT APPLICABLE



JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17075

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S032A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-17076

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S033A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : EE-91-16786

MATRIX: SOLID

SAMPLE ID CLIENT: P03-S034A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOLID SAMPLES

9101.780

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(mg/kg)				
<hr/>				
Parameter	E & E Laboratory No. 91- 16783	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
<hr/>				
Arsenic		ND	ND	NC
Chromium		ND	ND	NC
Zinc		6.2	ND	NC
Lead		ND	ND	NC
Cadmium		ND	ND	NC
Nickel		ND	ND	NC
Copper		ND	ND	NC
Silver		ND	ND	NC

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ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOLID SAMPLES

9101.792

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(mg/kg)				
<hr/>				
Parameter	E & E Laboratory No. 91- 16968	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
<hr/>				
Arsenic		ND	ND	NC
Cadmium		0.57	ND	NC
Chromium		1.1	ND	NC
Copper		9.7	10	8.2
Lead		13	14	8.8
Nickel		ND	ND	NC
Silver		ND	ND	NC
Zinc		5.7	5.5	3.3

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ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD'S  
ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOLID SAMPLES

9101.824

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(mg/kg)				
Parameter	E & E Laboratory No. 91- 17302	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
Arsenic		ND	ND	NC
Chromium		2.3	3.1	30
Zinc		13	19	41
Lead		71	76	7.0
Cadmium		0.82	1.0	20
Nickel		ND	ND	NC
Copper		21	33	46
Silver		ND	ND	NC

---

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.780

(mg/kg)

Parameter	E & E Laboratory No. 91- 16783	Original Value	Amount Added	Amount Determined	Percent Recovery
Arsenic		ND	200	190	96
Chromium		ND	20	21	105
Zinc		6.2	50	53	94
Lead		ND	50	48	96
Cadmium		ND	5.0	5.0	100
Nickel		ND	50	48	97
Copper		ND	25	24	97
Silver		ND	5.0	4.3	86

ND = NOT DETECTED

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOLID SAMPLES

9101.792

(mg/kg)

Parameter	E & E Laboratory No. 91- 16968	Original Value	Amount Added	Amount Determined	Percent Recovery
Arsenic		ND	200	190	95
Cadmium		0.57	5.0	5.0	90
Chromium		1.1	20	23	112
Copper		9.7	25	37	110
Lead		13	50	60	94
Nickel		ND	50	49	99
Silver		ND	50	4.8	95
Zinc		5.7	50	53	95

ND = NOT DETECTED

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.



QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOLID SAMPLES

9101.824

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(mg/kg)					
<hr/>					
Parameter	E & E Laboratory No. 91- 17302	Original Value	Amount Added	Amount Determined	Percent Recovery
<hr/>					
Arsenic		ND	200	220	109
Chromium		2.3	20	22	99
Zinc		13	50	59	93
Lead		71	50	120	88
Cadmium		0.82	5.0	5.3	90
Nickel		ND	50	51	103
Copper		21	25	44	94
Silver		ND	5.0	4.8	96

---

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

## METALS SECTION

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : METHOD BLANK

MATRIX: SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

## METALS SECTION

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

SAMPLE ID LAB : METHOD BLANK

MATRIX: SOLID

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	2.8		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : METHOD BLANK MATRIX: SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

SAMPLE ID LAB : METHOD BLANK

MATRIX: SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		6.0	MG/KG
Chromium	ND		1.0	MG/KG
Zinc	ND		2.0	MG/KG
Lead	ND		4.0	MG/KG
Cadmium	ND		0.50	MG/KG
Nickel	ND		4.0	MG/KG
Copper	ND		2.5	MG/KG
Silver	ND		1.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

TEST CODE : SPNTPH1

JOB NUMBER : 9101.792

Ecology and Environment, Inc.  
Analytical Services CenterCLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC TRPH UNITS : MG/KG  
PARAMETER : TRPH

SAMPLE ID	RESULTS	Q	QNT. LIMIT
EE-91-16965 P03-S004A	ND	-	5.0
EE-91-16966 P03-S009A	ND	-	5.0
EE-91-16967 P03-S010A	ND	-	5.0
EE-91-16968 P03-S013A	19000	-	5.0
EE-91-16969 P03-S013A-DUP.	16000	-	5.0
EE-91-16970 P03-S014A	13000	-	5.0
EE-91-16971 P03-S020A	17	-	5.0
EE-91-16972 P03-S026A	950	-	5.0
EE-91-16973 P03-S027A	1700	-	5.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17068 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S001A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	23	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17306 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S002A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	15	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17305 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S003A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	15	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17307 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S005A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	23	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

TEST CODE : SPNTPH1

JOB NUMBER : 9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC TRPH UNITS : MG/KG  
PARAMETER : TRPH

SAMPLE ID	RESULTS	Q	QNT. LIMIT
EE-91-16778 P03-S006A	ND	-	5.0
EE-91-16779 P03-S011A	ND	-	5.0
EE-91-16780 P03-S015A	480	-	5.0
EE-91-16781 P03-S016A	ND	-	5.0
EE-91-16782 P03-S021A	ND	-	5.0
EE-91-16783 P03-S022A	ND	-	5.0
EE-91-16784 P03-S028A	ND	-	5.0
EE-91-16785 P03-S029A	7.6	-	5.0
EE-91-16786 P03-S034A	11	-	5.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17069 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S007A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	14	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17304 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S008A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17070 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S012A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	20	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17071 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S017A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	230	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17302 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S018A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	2000	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17303 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S019A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	15	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17072 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S023A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	19	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17308 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S024A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	3700	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17309 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S025A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	13000	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17310 MATRIX: SOLID  
SAMPLE ID CLIENT: P03S025AD

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	12000	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17073 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S030A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	21	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17074 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S031A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	13	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17075 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S032A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	6.1	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17076 MATRIX: SOLID  
SAMPLE ID CLIENT: P03-S033A

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	11	-	5.0	MG/KG

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOLID SAMPLES

9101.780

(mg/kg)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
TRPH	16784	ND	100	95	92
	BATCH QC	11	110	100	84
	16786	11	100	78	65
	BATCH QC	30	100	110	83

ND = NOT DETECTED

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.792

(mg/kg)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
T. RECOVERABLE PETROLEUM HYDROCARBONS					
	Batch QC	11	100	78	65
	Batch QC	30	100	110	83

ND = NOT DETECTED

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOLID SAMPLES

9101.807

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(mg/kg)					
<hr/>					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
<hr/>					
T. Recoverable Petroleum Hydrocarbons					
	17076	11	140	150	103
	Batch QC	ND	130	140	109

---

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOLID SAMPLES

9101.824

(mg/kg)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
T. Recoverable Petroleum Hydrocarbons					
	17304	ND	110	110	102
	17310	12000	130	8100	**
	Batch QC	9.0	130	140	105
	Batch QC	ND	100	100	102

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOLID SAMPLES

9101.780

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(mg/kg)				
Parameter	E & E Laboratory No. 91-	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
TRPH	16783	ND	ND	NC
	16786	11	ND	NC

---

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOIL SAMPLES

9101.792

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(mg/kg)				
<hr/>				
Parameter	E & E Laboratory No. 91-	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
<hr/>				
T. RECOVERABLE PETROLEUM HYDROCARBONS	Batch QC	11	ND	NC

---

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD'S  
ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOLID SAMPLES

9101.807

---

(mg/kg)				
Parameter	E & E Laboratory No. 91-	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
T. Recoverable Petroleum Hydrocarbons	17076	11	ND	NC

---

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.



QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF SOLID SAMPLES

9101.824

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(mg/kg)				
<hr/>				
Parameter	E & E Laboratory No. 91-	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
<hr/>				
T. Recoverable Petroleum Hydrocarbons				
	17310	12000	14000	16
	Batch QC	9100	8900	2.7
<hr/>				

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17068

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S001A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17306

MATRIX : SOLID

SAMPLE ID CLIENT: P03S002A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : SPNPRG1

JOB NUMBER : 9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17305

MATRIX : SOLID

SAMPLE ID CLIENT: P03S003A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	1000		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16965

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S004A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17307

MATRIX : SOLID

SAMPLE ID CLIENT: P03S005A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : SPNPRG1

JOB NUMBER : 9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16778

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S006A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17069

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S007A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC UNITS : UG/KG

SAMPLE ID LAB : EE-91-17304 MATRIX : SOLID

SAMPLE ID CLIENT: P03S008A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16966

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S009A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16967

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S010A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16779

MATRIX : SOLID

SAMPLE ID CLIENT: PO3-S011A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17070

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S012A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16968

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S013A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		20000
Toluene	30000		20000
Ethylbenzene	24000		20000
Total Xylenes	200000		20000
1,2 - Dichlorobenzene	ND		20000
1,3 - Dichlorobenzene	ND		20000
1,4 - Dichlorobenzene	ND		20000
1,1 - dichloroethene	ND		20000
Methylene Chloride	ND		20000
Trans-1,2, - Dichloroethene	ND		20000
1,1 - dichloroethane	ND		20000
1,1,1 - Trichloroethane	ND		20000
1,2 - Dichloroethane	ND		20000
Trichloroethene	ND		20000
Tetrachloroethene	ND		20000
chlorobenzene	ND		20000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16969

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S013A-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		20000
Toluene	PRESENT	L	20000
Ethylbenzene	PRESENT	L	20000
Total Xylenes	150000		20000
1,2 - Dichlorobenzene	ND		20000
1,3 - Dichlorobenzene	ND		20000
1,4 - Dichlorobenzene	ND		20000
1,1 - dichloroethene	ND		20000
Methylene Chloride	ND		20000
Trans-1,2, - Dichloroethene	ND		20000
1,1 - dichloroethane	ND		20000
1,1,1 - Trichloroethane	ND		20000
1,2 - Dichloroethane	ND		20000
Trichloroethene	ND		20000
Tetrachloroethene	ND		20000
chlorobenzene	ND		20000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16970

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S014A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		5000
Toluene	ND		5000
Ethylbenzene	7100		5000
Total Xylenes	43000		5000
1,2 - Dichlorobenzene	ND		5000
1,3 - Dichlorobenzene	ND		5000
1,4 - Dichlorobenzene	ND		5000
1,1 - dichloroethene	ND		5000
Methylene Chloride	ND		5000
Trans-1,2, - Dichloroethene	ND		5000
1,1 - dichloroethane	ND		5000
1,1,1 - Trichloroethane	ND		5000
1,2 - Dichloroethane	ND		5000
Trichloroethene	ND		5000
Tetrachloroethene	ND		5000
chlorobenzene	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16780

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S015A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16781

MATRIX : SOLID

SAMPLE ID CLIENT: PO3-S016A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17071

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S017A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC UNITS : UG/KG

SAMPLE ID LAB : EE-91-17302 MATRIX : SOLID

SAMPLE ID CLIENT: P03S018A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : SPNPRG1

JOB NUMBER : 9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17303

MATRIX : SOLID

SAMPLE ID CLIENT: P03S019A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16971

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S020A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16782

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S021A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16783

MATRIX : SOLID

SAMPLE ID CLIENT: PO3-S022A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17072

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S023A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17308

MATRIX : SOLID

SAMPLE ID CLIENT: P03S024A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		5000
Toluene	ND		5000
Ethylbenzene	ND		5000
Total Xylenes	10000		5000
1,2 - Dichlorobenzene	ND		5000
1,3 - Dichlorobenzene	ND		5000
1,4 - Dichlorobenzene	ND		5000
1,1 - dichloroethene	ND		5000
Methylene Chloride	ND		5000
Trans-1,2, - Dichloroethene	ND		5000
1,1 - dichloroethane	ND		5000
1,1,1 - Trichloroethane	ND		5000
1,2 - Dichloroethane	ND		5000
Trichloroethene	ND		5000
Tetrachloroethene	ND		5000
chlorobenzene	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17309

MATRIX : SOLID

SAMPLE ID CLIENT: P03S025A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10000
Toluene	39000		10000
Ethylbenzene	16000		10000
Total Xylenes	110000		10000
1,2 - Dichlorobenzene	ND		10000
1,3 - Dichlorobenzene	ND		10000
1,4 - Dichlorobenzene	ND		10000
1,1 - dichloroethene	ND		10000
Methylene Chloride	ND		10000
Trans-1,2, - Dichloroethene	ND		10000
1,1 - dichloroethane	ND		10000
1,1,1 - Trichloroethane	ND		10000
1,2 - Dichloroethane	ND		10000
Trichloroethene	ND		10000
Tetrachloroethene	ND		10000
chlorobenzene	ND		10000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17310

MATRIX : SOLID

SAMPLE ID CLIENT: P03S025AD

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10000
Toluene	39000		10000
Ethylbenzene	18000		10000
Total Xylenes	130000		10000
1,2 - Dichlorobenzene	ND		10000
1,3 - Dichlorobenzene	ND		10000
1,4 - Dichlorobenzene	ND		10000
1,1 - dichloroethene	ND		10000
Methylene Chloride	ND		10000
Trans-1,2, - Dichloroethene	ND		10000
1,1 - dichloroethane	ND		10000
1,1,1 - Trichloroethane	ND		10000
1,2 - Dichloroethane	ND		10000
Trichloroethene	ND		10000
Tetrachloroethene	ND		10000
chlorobenzene	ND		10000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16972

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S026A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16973

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S027A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		2000
Toluene	ND		2000
Ethylbenzene	ND		2000
Total Xylenes	2500		2000
1,2 - Dichlorobenzene	ND		2000
1,3 - Dichlorobenzene	ND		2000
1,4 - Dichlorobenzene	ND		2000
1,1 - dichloroethene	ND		2000
Methylene Chloride	ND		2000
Trans-1,2, - Dichloroethene	ND		2000
1,1 - dichloroethane	ND		2000
1,1,1 - Trichloroethane	ND		2000
1,2 - Dichloroethane	ND		2000
Trichloroethene	ND		2000
Tetrachloroethene	ND		2000
chlorobenzene	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16784

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S028A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16785

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S029A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17073

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S030A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17074

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S031A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17075

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S032A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17076

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S033A

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16786

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S034A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
PERCENT RECOVERY AND RELATIVE PERCENT DIFFERENCE (RPD)  
OF SOIL MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)  
(Sample # 16778)

9101.780

(ug/kg)								
Parameter	Original Value	Amount Added		Amount Determined		Percent Recovery		
		MS	MSD	MS	MSD	MS	MSD	RPD
Benzene	ND	2500	2500	2300	2300	92	92	0
Toluene	ND	2500	2500	2400	2400	96	96	0
Ethyl Benzene	ND	2500	2500	2300	2300	92	92	0
1,2-Dichlorobenzene	ND	5000	5000	4400	4400	88	88	0
1,3-Dichlorobenzene	ND	5000	5000	4500	4400	90	88	2.2
1,4-Dichlorobenzene	ND	5000	5000	4600	4500	92	90	2.2
1,1-Dichloroethene	ND	2500	2500	630	560	25*	22*	12
Methylene Chloride	\ ND							
Trans-1,2-Dichloroethene	/ ND	5000	5000	5000	4800	100	96	4.1
1,1-Dichloroethane	ND	2500	2500	2600	2700	104	108	3.8
1,1,1-Trichloroethane	ND	2500	2500	2400	2400	96	96	0
1,2-Dichloroethane	ND	2500	2500	2400	2600	96	104	8.0
Trichloroethene	ND	2500	2500	2500	2600	100	104	3.9
Tetrachloroethene	ND	2500	2500	2600	2500	104	100	3.9

\* Poor recovery due to possible matrix interference and/or improper peak integration.

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
PERCENT RECOVERY AND RELATIVE PERCENT DIFFERENCE (RPD)  
OF SOIL MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)  
(Sample # 17068)

9101.807

(ug/kg)								
Parameter	Original Value	Amount Added		Amount Determined		Percent Recovery		
		MS	MSD	MS	MSD	MS	MSD	RPD
Benzene	ND	2500	2500	2400	2300	96	92	4.3
Toluene	ND	2500	2500	2400	2200	96	88	8.7
Ethyl Benzene	ND	2500	2500	2200	2000	88	80	9.5
1,2-Dichlorobenzene	ND	5000	5000	3900	3500	78	70	11
1,3-Dichlorobenzene	ND	5000	5000	3700	3200	74	64	14
1,4-Dichlorobenzene	ND	5000	5000	4000	3400	80	68	16
1,1-Dichloroethene	ND	2500	2500	1200	1000	48	40	18
Methylene Chloride	ND	2500	2500	2600	2600	104	104	0
Trans-1,2-Dichloroethene	ND	2500	2500	2600	2600	104	104	0
1,1-Dichloroethane	ND	2500	2500	2300	2200	92	88	4.4
1,1,1-Trichloroethane	ND	2500	2500	2300	2200	92	88	4.4
1,2-Dichloroethane	ND	2500	2500	2000	1900	80	76	5.1
Trichloroethene	ND	2500	2500	2100	1900	84	76	10
Tetrachloroethene	ND	2500	2500	2000	1700	80	68	16

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
PERCENT RECOVERY AND RELATIVE PERCENT DIFFERENCE (RPD)  
OF SOIL MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)  
(Sample # 17304)

9101.824

(ug/kg)								
Parameter	Original Value	Amount Added		Amount Determined		Percent Recovery		
		MS	MSD	MS	MSD	MS	MSD	RPD
Benzene	ND	2500	2500	2600	2500	104	100	3.9
Toluene	ND	2500	2500	2600	2600	104	104	0
Ethyl Benzene	ND	2500	2500	2500	2500	100	100	0
1,2-Dichlorobenzene	ND	5000	5000	4900	5200	98	104	5.9
1,3-Dichlorobenzene	ND	5000	5000	5000	5400	100	108	7.7
1,4-Dichlorobenzene	ND	5000	5000	5100	5400	102	108	5.7
1,1-Dichloroethene	ND	2500	2500	2700	2500	108	100	7.7
Methylene Chloride	ND	2500	2500	2900	2700	116	108	7.1
Trans-1,2-Dichloroethene	ND	2500	2500	2600	2500	104	100	3.9
1,1-Dichloroethane	ND	2500	2500	2600	2500	104	100	3.9
1,1,1-Trichloroethane	ND	2500	2500	2600	2500	104	100	3.9
1,2-Dichloroethane	ND	2500	2500	2500	2400	100	96	4.1
Trichloroethene	ND	2500	2500	2700	3000	108	120	10
Tetrachloroethene	ND	2500	2500	2500	2500	100	100	0

ND = NOT DETECTED



QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.780

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Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	16778	107
	16779	110
	16780	106
	16781	104
	16782	102
	16783	99
	16784	98
	16785	100
	16786	97
	Blank	100
1,4-Dichlorobutane	16778	112
	16779	104
	16780	98
	16781	98
	16782	98
	16783	104
	16784	98
	16785	94
	16786	95
	Blank	100

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QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.792

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Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	16965	100
	16966	100
	16967	90
	16968	143
	16969	129
	16970	104
	16971	100
	16972	180
	16973	133
	Method Blank #1	100
	Method Blank #2	101
	Method Blank #3	100
	Method Blank #4	100
1,4-Dichlorobutane	16965	94
	16966	93
	16967	85
	16968	86
	16969	90
	16970	106
	16971	86
	16972	91
	16973	122
	Method Blank #1	100
	Method Blank #2	105
	Method Blank #3	100
	Method Blank #4	100

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QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.807

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Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	17068	100
	17069	93
	17070	93
	17071	100
	17072	90
	17073	83
	17074	93
	17075	90
	17076	97
	Method Blank #1	100
	Method Blank #2	100
1,4-Dichlorobutane	17068	84
	17069	86
	17070	84
	17071	78
	17072	79
	17073	72
	17074	124
	17075	111
	17076	124
	Method Blank #1	100
	Method Blank #2	100

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QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.824

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Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	17302	142
	17303	97
	17304	95
	17305	86
	17306	94
	17307	89
	17308	97
	17309	125
	17310	122
	Method Blank #1	100
	Method Blank #2	100
1,4-Dichlorobutane	17302	98
	17303	94
	17304	101
	17305	96
	17306	100
	17307	117
	17308	118
	17309	110
	17310	104
	Method Blank #1	100
	Method Blank #2	100

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QUALITY CONTROL FOR ACCURACY AND PRECISION:  
 PERCENT RECOVERY OF WATER MATRIX SPIKE (MS)  
 (Sample # Blank Spike)

9101.780

(ug/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzene		ND	20	20	100
Toluene		ND	20	18	90
Ethyl Benzene		ND	20	19	95
1,2-Dichlorobenzene		ND	20	17	85
1,3-Dichlorobenzene		ND	20	17	85
1,4-Dichlorobenzene		ND	20	18	90
1,1-Dichloroethene		ND	20	29	145
Methylene Chloride		\			
Trans-1,2-Dichloroethene		/ ND	40	31	78
1,1-Dichloroethane		ND	20	16	80
1,1,1-Trichloroethane		ND	20	20	100
1,2-Dichloroethane		ND	20	21	105
Trichloroethene		ND	20	21	105
Tetrachloroethene		ND	20	20	100

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
 PERCENT RECOVERY OF WATER MATRIX SPIKE (MS)  
 (Sample # Blank Spike)

9101.824

(ug/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzene		ND	20	21	105
Toluene		ND	20	20	100
Ethyl Benzene		ND	20	20	100
1,2-Dichlorobenzene		ND	20	21	105
1,3-Dichlorobenzene		ND	20	20	100
1,4-Dichlorobenzene		ND	20	20	100
1,1-Dichloroethene		ND	20	16	80
Methylene Chloride		ND	20	19	95
Trans-1,2-Dichloroethene		ND	20	20	100
1,1-Dichloroethane		ND	20	21	105
1,1,1-Trichloroethane		ND	20	21	105
1,2-Dichloroethane		ND	20	23	115
Trichloroethene		ND	20	23	115
Tetrachloroethene		ND	20	22	110

ND = NOT DETECTED

TEST CODE :SPNPRG1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK 1 MATRIX : SOLID

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND	-	1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK 2 MATRIX : SOLID

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PURGABLES- GC UNITS : UG/KG  
SAMPLE ID LAB : METHOD BLANK 3 MATRIX : SOLID  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK 4 MATRIX : SOLID

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK #1

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK #2

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK #1

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : SPNPRG1

JOB NUMBER : 9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PURGABLES- GC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK #2

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	ND		1000
Ethylbenzene	ND		1000
Total Xylenes	ND		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans-1,2, - Dichloroethene	ND		1000
1,1 - dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17068

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S001A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17306

MATRIX : SOLID

SAMPLE ID CLIENT: P03S002A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17305

MATRIX : SOLID

SAMPLE ID CLIENT: P03S003A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16965

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S004A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17307

MATRIX : SOLID

SAMPLE ID CLIENT: P03S005A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16778

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S006A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17069

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S007A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17304

MATRIX : SOLID

SAMPLE ID CLIENT: P03S008A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16966

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S009A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----

QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16967

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S010A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16779

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S011A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17070

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S012A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16968

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S013A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	11000	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16969

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S013A-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	10000	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16970

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S014A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	2800		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16780

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S015A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16781

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S016A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17071

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S017A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : SPNPAH1

JOB NUMBER : 9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17302

MATRIX : SOLID

SAMPLE ID CLIENT: P03S018A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17303

MATRIX : SOLID

SAMPLE ID CLIENT: P03S019A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16971

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S020A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16782

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S021A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16783

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S022A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17072

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S023A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17308

MATRIX : SOLID

SAMPLE ID CLIENT: P03S024A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	3200	-	1000

QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17309

MATRIX : SOLID

SAMPLE ID CLIENT: PO3SO25A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	8600	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17310

MATRIX : SOLID

SAMPLE ID CLIENT: P03S025AD

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	9000		1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16972

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S026A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16973

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S027A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	1300	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16784

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S028A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16785

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S029A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17073

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S030A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17074

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S031A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17075

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S032A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17076

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S033A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16786

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S034A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.780

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene	Batch QC	ND	50	40	80

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.792

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene	16965	ND	50	40	80

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.807

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene					
	17076 MS	ND	50	50	100

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.824

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene	17310	ND	50	47	94

ND = NOT DETECTED

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK 1

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK 2

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK 3

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK 1

MATRIX : SOLID

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PAH - LC UNITS : UG/KG  
SAMPLE ID LAB : METHOD BLANK 2 MATRIX : SOLID  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PAH - LC UNITS : UG/KG  
SAMPLE ID LAB : METHOD BLANK 3 MATRIX : SOLID  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK #1

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		1000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK #2

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK #3

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	1000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PAH - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17068

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S001A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17306

MATRIX : SOLID

SAMPLE ID CLIENT: P03S002A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17305

MATRIX : SOLID

SAMPLE ID CLIENT: P03S003A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16965

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S004A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17307

MATRIX : SOLID

SAMPLE ID CLIENT: P03S005A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16778

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S006A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17069

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S007A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17304

MATRIX : SOLID

SAMPLE ID CLIENT: P03S008A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16966

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S009A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16967

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S010A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16779

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S011A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17070

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S012A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----

QUALIFIERS: C = COMMENT           ND = NOT DETECTED  
          J = ESTIMATED VALUE    B = ALSO PRESENT IN BLANK  
          L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16968

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S013A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	360000	-	2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16969

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S013A-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	230000		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16970

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S014A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	300000		2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
             J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
             L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16780

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S015A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16781

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S016A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17071

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S017A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	12000	-	2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17302

MATRIX : SOLID

SAMPLE ID CLIENT: P03S018A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	30000		2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17303

MATRIX : SOLID

SAMPLE ID CLIENT: P03S019A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16971

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S020A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16782

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S021A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16783

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S022A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
             J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
             L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17072

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S023A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17308

MATRIX : SOLID

SAMPLE ID CLIENT: P03S024A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	130000	-	2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17309

MATRIX : SOLID

SAMPLE ID CLIENT: P03S025A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	380000	-	2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17310

MATRIX : SOLID

SAMPLE ID CLIENT: P03S025AD

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	360000	-	2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16972

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S026A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	13000	-	2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16973

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S027A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	61000		2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
             J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
             L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16784

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S028A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16785

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S029A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17073

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S030A

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	3900	-	2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17074

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S031A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17075

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S032A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17076

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S033A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16786

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S034A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.780

---

(ug)					
<hr/>					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
<hr/>					
2,4,6-Trichlorophenol					
	16778	ND	100	80	80

---

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.972

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
2,4,6-Trichlorophenol					
	16965	ND	100	66	66

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.807

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
2,4,6-Trichlorophenol					
	17068 MS	ND	100	89	89

ND = NOT DETECTED



QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED SOIL SAMPLES

9101.824

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
2,4,6-Trichlorophenol					
	17302 MS	ND	100	79	79

ND = NOT DETECTED

TEST CODE :SPNPHL1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/KG  
SAMPLE ID LAB : METHOD BLANK MATRIX : SOLID  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PHENOL - LC

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	2000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17068

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S001A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17306

MATRIX : SOLID

SAMPLE ID CLIENT: P03S002A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17305

MATRIX : SOLID

SAMPLE ID CLIENT: P03S003A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16965

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S004A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND	-	1000
Lindane	ND	-	1000
Aldrin	ND	-	1000
4,4 - DDT	ND	-	1000
Dieldrin	ND	-	1000
Endrin	ND	-	1000
Chlordane	ND	-	1000
4,4-DDE	ND	-	1000
Total PCBs	ND	-	5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17307

MATRIX : SOLID

SAMPLE ID CLIENT: P03S005A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16778

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S006A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17069

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S007A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17304

MATRIX : SOLID

SAMPLE ID CLIENT: P03S008A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16966

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S009A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND	-	1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16967

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S010A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16779

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S011A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17070

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S012A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16968

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S013A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16969

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S013A-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16970

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S014A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16780

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S015A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16781

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S016A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17071

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S017A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17302

MATRIX : SOLID

SAMPLE ID CLIENT: P03S018A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17303

MATRIX : SOLID

SAMPLE ID CLIENT: P03S019A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----

QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16971

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S020A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16782

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S021A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16783

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S022A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17072

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S023A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17308

MATRIX : SOLID

SAMPLE ID CLIENT: P03S024A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17309

MATRIX : SOLID

SAMPLE ID CLIENT: P03S025A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17310

MATRIX : SOLID

SAMPLE ID CLIENT: P03S025AD

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16972

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S026A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16973

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S027A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16784

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S028A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16785

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S029A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17073

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S030A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17074

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S031A

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----

QUALIFIERS: C = COMMENT            ND = NOT DETECTED  
             J = ESTIMATED VALUE    B = ALSO PRESENT IN BLANK  
             L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17075

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S032A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT            ND = NOT DETECTED  
             J = ESTIMATED VALUE    B = ALSO PRESENT IN BLANK  
             L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-17076

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S033A

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
              J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
              L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : EE-91-16786

MATRIX : SOLID

SAMPLE ID CLIENT: P03-S034A

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY:  
PERCENT RECOVERY OF SOIL MATRIX SPIKE  
(Sample # 16778)

9101.780

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/kg)				
Heptachlor	ND	400	410	102
Lindane	ND	400	391	98
Aldrin	ND	400	446	112
4,4'-DDT	ND	1000	1072	107
Dieldrin	ND	1000	1107	110
Endrin	ND	1000	1164	116
PCB-1254	ND	5000	6052	121

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY:  
PERCENT RECOVERY OF SOIL MATRIX SPIKE  
(Sample # BATCH QC)

9101.792

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/kg)				
Heptachlor	ND	400	410	102
Lindane	ND	400	391	98
Aldrin	ND	400	446	112
4,4'-DDT	ND	1000	1072	107
Dieldrin	ND	1000	1107	110
Endrin	ND	1000	1164	116
PCB-1254	ND	5000	6052	121

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY:  
 PERCENT RECOVERY OF SOIL MATRIX SPIKE  
 (Sample # 17074)

9101.807

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/kg)				
Heptachlor	ND	400	422	106
Lindane	ND	400	383	96
Aldrin	ND	400	427	107
4,4'-DDT	ND	1000	1064	106
Dieldrin	ND	1000	1069	107
Endrin	ND	1000	1129	113
PCB-1254	ND	5000	5806	116

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY:  
PERCENT RECOVERY OF SOIL MATRIX SPIKE  
(Sample # 17310)

9101.824

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/kg)				
Heptachlor	ND	400	465	116
Lindane	ND	400	406	102
Aldrin	ND	400	453	113
4,4'-DDT	ND	1000	1080	108
Dieldrin	ND	1000	1160	116
Endrin	ND	1000	1178	118
PCB-1254	ND	5000	5505	110

ND = NOT DETECTED

TEST CODE :SPNP&P1

JOB NUMBER :9101.780

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PEST./PCB UNITS : UG/KG  
SAMPLE ID LAB : METHOD BLANK 598/175 MATRIX : SOLID  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND	-	1000
Lindane	ND	-	1000
Aldrin	ND	-	1000
4,4 - DDT	ND	-	1000
Dieldrin	ND	-	1000
Endrin	ND	-	1000
Chlordane	ND	-	1000
4,4-DDE	ND	-	1000
Total PCBs	ND	-	5000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :SPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :SPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

RESULTS IN WET WEIGHT

TEST NAME : PNC PEST./PCB

UNITS : UG/KG

SAMPLE ID LAB : METHOD BLANK

MATRIX : SOLID

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		1000
Lindane	ND		1000
Aldrin	ND		1000
4,4 - DDT	ND		1000
Dieldrin	ND		1000
Endrin	ND		1000
Chlordane	ND		1000
4,4-DDE	ND		1000
Total PCBs	ND		5000

-----  
QUALIFIERS: C = COMMENT                      ND = NOT DETECTED  
             J = ESTIMATED VALUE            B = ALSO PRESENT IN BLANK  
             L = PRESENT BELOW STATED DETECTION LIMIT

APPENDIX J

TEMPORARY MONITORING WELL GROUNDWATER  
SAMPLING ANALYTICAL SCREENING RESULTS

MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *GJHahn/p*  
DATE: August 12, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.792  
CC: Lab File

Attached is the laboratory report of the analysis conducted on fifteen samples received at the Analytical Services Center on July 25, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/jp  
Enclosure

MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *Gary Hahn*  
DATE: August 9, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.807  
CC: Lab File

Attached is the laboratory report of the analysis conducted on eleven samples received at the Analytical Services Center on July 26, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/kr  
Enclosure

MEMORANDUM

TO: John Barksdale  
FROM: Gary Hahn *Gary Hahn*  
DATE: August 12, 1991  
SUBJECT: UH-8000 Pensacola Report  
RE: 9101.824  
CC: Lab File

Attached is the laboratory report of the analysis conducted on fourteen samples received at the Analytical Services Center on July 27, 1991. Analysis was performed according to the screening procedures set forth in "Generic Quality Assurance Project Plan, Contamination Assessments and Remedial Activities, Naval Air Station Pensacola, Pensacola, Florida," July 1990.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/kr  
Enclosure

## Page 1 of 1

\*See CONCENTRATION RANGE on back of form.

EXTRA VOA INCLUDED FOR TEMPERATURE MEASUREMENT  
VOA at 5°C upon receipt  
at LAB vis



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ANALYZE ACCORDING TO

SITE SPECIFIC QAPP

SEE JACK MILLER

9101.792

Range 14959 → 14973

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No. UHB030		Project Name NASP PHASE 1 BATCH 2		Project Manager JOHN BARKSDALE		<div style="text-align: center;">REMARKS</div> <div style="text-align: center;">             SCREENING VOCs              SCREENING PAHs              SCREENING PESTICIDES              SCREENING METALS              TAPs           </div>														
Samplers (Signatures) <i>[Signature]</i>		Field Team Leader SCOTT DONELICK																		
STATION NUMBER	DATE	TIME	SAMPLE TYPE			SAMPLE INFORMATION EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS												
			COMP	GRAB	AIR															
P03	EW026	07/24	1440		X	LOW	P03GW026	5	X	X	X	X	X	X	X	VOA: LOT: 1123063				
P03	GW027	07/24	1400		X	LOW	P03GW027	5	X	X	X	X	X	X	X	QC: 10355C				
P03	GW027D	07/24	1400		X	LOW	P03GW027	5	X	X	X	X	X	X	X	1/2 GALLON AMBER				
																LOT: 1093042				
																QC: 10280C				
																LITRE AMBER				
																LOT: 1057051				
																QC: 10141C				
																LITRE POLY				
																LOT: 1092021				
																QC: 10230C				
Relinquished By: (Signature) <i>[Signature]</i>		Date/Time: 1700 07/24/91		Received By: (Signature) <i>[Signature]</i>		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Date/Time:		Received By: (Signature)		Ship Via FEDERAL EXPRESS				
Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Date/Time:		Received By: (Signature)		BL/Airbill Number: 0776546816				
Relinquished By: (Signature) Fed Express		Date/Time: 7-25-91/0930		Received For Laboratory By: (Signature) <i>[Signature]</i>		Relinquished By: (Signature)		Date/Time:		Received For Laboratory By: (Signature)		Date/Time:		Received For Laboratory By: (Signature)		Date: 07/24/91				

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files  
\* See CONCENTRATION RANGE on back of form.

EXTRA VOA INCLUDED FOR TEMPERATURE MEASUREMENT

VOA at 5°C upon receipt at LAB w

234055



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ANALYZE ACCORDING TO  
SITE SPECIFIC QAPP  
SEE JACK MILLER

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.: UH8030		Project Name: NASP PHASE 1 BATCH 2				Project Manager: JOHN BARKSDALE				<div>REMARKS</div> <div>HAZARDOUS VOCs HAZARDOUS PAHs HAZARDOUS PHENOLS HAZARDOUS PCBs HAZARDOUS METALS TRP4</div>										
Sampler(s) (Signature): <i>[Signature]</i>						Field Team Leader: SCOTT DONELICK														
STATION NUMBER	DATE	TIME	SAMPLE TYPE			SAMPLE INFORMATION EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS												
			COMP	GRAB	AIR															
123 6N030	07/25			X		LOW	P03GW030	5	X	X	X	X	X	X	X	VOAs LOT: 1123063				
123 6N023	07/25			X		LOW	P03GW023	5	X	X	X	X	X	X	X	QC: 10355C				
																1/2 GALLON AMBER				
																LOT: 1071061				
																QC: 10180C				
																LITRE AMBER				
																LOT: K57051				
																QC: 10141C				
																LITRE POLY				
																LOT: 1148011				
																QC: 10384C				
Relinquished By: (Signature) <i>[Signature]</i>			Date/Time: 07/25/91 1700			Received By: (Signature) <i>[Signature]</i>			Relinquished By: (Signature)			Date/Time			Received By: (Signature)			Ship Via: FEDERAL EXPRESS		
Relinquished By: (Signature)			Date/Time:			Received By: (Signature)			Relinquished By: (Signature)			Date/Time			Received By: (Signature)			BL/Airbill Number: 0776546875		
Relinquished By: (Signature) Federal Express			Date/Time: 7/26/91 0930			Received For Laboratory By: (Signature) <i>[Signature]</i>			Relinquished By: (Signature)			Date/Time			Received For Laboratory By: (Signature)			Date: 07/25/91		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files  
\* See CONCENTRATION RANGE on back of form.

234055

EXTRA VOA INCLUDED FOR TEMPERATURE MEASUREMENT  
VOA Temp. at 7°C upon  
receipt at LAB VLS



19

300 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/684-8080  
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9101.824  
1526

ANALYZE ALL "NG TO  
SITE SPECIFIC QAPP  
SEE JACK MILLER  
S. WATERS  
9-5015  
CHAIN-OF-CUSTODY RECORD

Page 1 of 1

C27

Project No.: UH8030		Project Name: NASP PHASE I BATCH 2		Project Manager: JOHN BARKSDALE		<div style="text-align: right;">REMARKS</div> <div style="transform: rotate(-45deg); position: absolute; top: 0; right: 0;">           GREENING VOCs            GREENING PAHs            GREENING PESTICIDES            GREENING POLYMER            GREENING METALS            TCEPH         </div>									
Sampler's Signature: [Signature]		Field Team Leader: SCOTT DONELICK													
STATION NUMBER	DATE	TIME	SAMPLE TYPE			EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS							
			COMP	GRAB	AIR										
GWOZ4	07/26	1500		X		LOW 17297	P03GWOZ4	5	X	X	X	X	X	X	VCA LOT: 1123063
GWOZ1	07/26	1615		X		LOW 17298	P03GWOZ1	5	X	X	X	X	X	X	QC: 10355C
															1/2 GALLON AMBER
															LOT: 1071061
															QC: 10180C
															LITRE AMBER
															LOT: 1057051
															QC: 10141C
															LITRE POLY
															LOT: 1148011
															QC: 10384C
Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Ship Via:			
[Signature]		07/26/91 1700		FED. EXP.								FEDERAL EXPRESS			
Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		Relinquished By: (Signature)		Date/Time:		Received By: (Signature)		BL/Airbill Number:			
												0776546945			
Relinquished By: (Signature)		Date/Time:		Received For Laboratory By: (Signature)		Relinquished By: (Signature)		Date/Time:		Received For Laboratory By: (Signature)		Date:			
FED. EXP.		7/27/91		K. Marsh								07/26/91			

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files  
\*See CONCENTRATION RANGE on back of form.

EXTRA VOA INCLUDED FOR TEMPERATURE ANALYSIS:  $8^{\circ}\text{C} - 7/27/91 \text{ RM}$

234055



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ANALYZE ACCORDING TO  
SITE SPECIFIC QAPP  
SEE JACK MILLER

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No.: UH8030		Project Name: NASP PHASE 1 BATCH 2		Project Manager: JOHN BARKSDALE		<div style="display: flex; justify-content: space-between;"> <div> <p>SCREENING VOCs</p> <p>SCREENING PAHs</p> <p>SCREENING PESTICIDES</p> <p>SCREENING METALS</p> <p>TRPH</p> </div> <div>REMARKS</div> </div>												
Samplers: (Signatures)		Field Team Leader: SCOTT TENELICK																
STATION NUMBER	DATE	TIME	SAMPLE TYPE			SAMPLE INFORMATION	STATION LOCATION	NUMBER OF CONTAINERS										
			COMP	GRAB	AIR				EXPECTED COMPOUNDS (Concentration)*									
203	GW033	07/26	0940	X		LOW	17299	P036W033	5	X	X	X	X	X	X	X	VOAs	LOT: 1123063
63	GW032	07/26	1000	X		LOW	17300	P036W032	5	X	X	X	X	X	X	X	GC: 10355C	
123	GW031	07/26	1030	X		LOW	17301	P036W031	5	X	X	X	X	X	X	X	1/2 GALLON AMBER	
																	LOT: 1071061	
																	GC: 10180C	
																	LITRE AMBER	
																	LOT: 1057051	
																	GC: 10141C	
																	LITRE POLY	
																	LOT: 1148011	
																	GC: 10384C	

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Ship Via:
	07/26/91 1700	F.E.				FEDERAL EXPRESS
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	BL/Airbill Number:
						0776546956
Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Relinquished By: (Signature)	Date/Time:	Received For Laboratory By: (Signature)	Date:
F.E.	7/27/91 945	R. Marsh				07/26/91

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files  
\*See CONCENTRATION RANGE on back of form.

EXTRA V04 INCLUDED FOR TEMPERATURE MEASUREMENT

7°C RM

234056

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
-----	-----	----	-----	-----	-----
16959.01	P03-GW026	WPNPRG1	07/24/91		07/31/91
16959.03	P03-GW026	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16959.04	P03-GW026	WPNTPH1	07/24/91		08/01/91
16959.05	P03-GW026	WPNMET1	07/24/91		07/28/91
16960.01	P03-GW027	WPNPRG1	07/24/91		07/31/91
16960.03	P03-GW027	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16960.04	P03-GW027	WPNTPH1	07/24/91		08/01/91
16960.05	P03-GW027	WPNMET1	07/24/91		07/28/91
16961.01	P03-GW027-DUP.	WPNPRG1	07/24/91		07/31/91
16961.03	P03-GW027-DUP.	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16961.04	P03-GW027-DUP.	WPNTPH1	07/24/91		08/01/91
16961.05	P03-GW027-DUP.	WPNMET1	07/24/91		07/28/91
16962.01	P03-GW028	WPNPRG1	07/24/91		07/31/91
16962.03	P03-GW028	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16962.04	P03-GW028	WPNTPH1	07/24/91		08/01/91
16962.05	P03-GW028	WPNMET1	07/24/91		07/28/91
16963.01	P03-GW029	WPNPRG1	07/24/91		07/31/91
16963.03	P03-GW029	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16963.04	P03-GW029	WPNTPH1	07/24/91		08/01/91
16963.05	P03-GW029	WPNMET1	07/24/91		07/28/91
16964.01	P03-GW034	WPNPRG1	07/24/91		07/31/91
16964.03	P03-GW034	WPNP&P1	07/24/91		07/29/91
		WPNPAH1	07/24/91		08/02/91
		WPNPHL1	07/24/91		07/30/91
16964.04	P03-GW034	WPNTPH1	07/24/91		08/01/91
16964.05	P03-GW034	WPNMET1	07/24/91		07/28/91
16965.01	P03-S004A	SPNPRG1	07/24/91		08/01/91
16965.02	P03-S004A	SPNTPH1	07/24/91		08/05/91
16965.03	P03-S004A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/30/91
		SPNPAH1	07/24/91		08/01/91
		SPNPHL1	07/24/91		07/31/91
16966.01	P03-S009A	SPNPRG1	07/24/91		08/01/91
16966.02	P03-S009A	SPNTPH1	07/24/91		08/05/91
16966.03	P03-S009A	SPNMET1	07/24/91		07/28/91
		SPNP&P1	07/24/91		07/30/91
		SPNPAH1	07/24/91		08/01/91

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
-----	-----	----	-----	-----	-----
17066.01	P03-GW023	WPNPRG1	07/25/91		07/31/91
17066.03	P03-GW023	WPNP&P1	07/25/91		07/31/91
		WPNPAH1	07/25/91		08/02/91
		WPNPHL1	07/25/91		08/02/91
17066.04	P03-GW023	WPNTPH1	07/25/91		07/30/91
17066.05	P03-GW023	WPNMET1	07/25/91		07/31/91
17067.01	P03-GW030	WPNPRG1	07/25/91		07/31/91
17067.03	P03-GW030	WPNP&P1	07/25/91		07/31/91
		WPNPAH1	07/25/91		08/02/91
		WPNPHL1	07/25/91		08/02/91
17067.04	P03-GW030	WPNTPH1	07/25/91		07/30/91
17067.05	P03-GW030	WPNMET1	07/25/91		07/31/91
17068.01	P03-S001A	SPNPRG1	07/25/91		08/01/91
17068.02	P03-S001A	SPNTPH1	07/25/91		07/29/91
17068.03	P03-S001A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/02/91
17069.01	P03-S007A	SPNPRG1	07/25/91		08/02/91
17069.02	P03-S007A	SPNTPH1	07/25/91		07/29/91
17069.03	P03-S007A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17070.01	P03-S012A	SPNPRG1	07/25/91		08/02/91
17070.02	P03-S012A	SPNTPH1	07/25/91		07/29/91
17070.03	P03-S012A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17071.01	P03-S017A	SPNPRG1	07/25/91		08/02/91
17071.02	P03-S017A	SPNTPH1	07/25/91		07/29/91
17071.03	P03-S017A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17072.01	P03-S023A	SPNPRG1	07/25/91		08/02/91
17072.02	P03-S023A	SPNTPH1	07/25/91		07/29/91
17072.03	P03-S023A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91
		SPNPHL1	07/25/91		08/03/91
17073.01	P03-S030A	SPNPRG1	07/25/91		08/02/91
17073.02	P03-S030A	SPNTPH1	07/25/91		07/29/91
17073.03	P03-S030A	SPNMET1	07/25/91		07/31/91
		SPNP&P1	07/25/91		07/31/91
		SPNPAH1	07/25/91		08/02/91

Ecology and Environment, Inc.  
SAMPLE TRACKING REPORT

LAB SAMPLE ID	CLIENT SAMPLE ID	TEST CODE	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED
17297.01	P03GW024	WPNPRG1	07/26/91		08/02/91
17297.03	P03GW024	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17297.04	P03GW024	WPNTPH1	07/26/91		07/30/91
17297.05	P03GW024	WPNMET1	07/26/91		07/31/91
17298.01	P03GW025	WPNPRG1	07/26/91		08/06/91
17298.03	P03GW025	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17298.04	P03GW025	WPNTPH1	07/26/91		07/30/91
17298.05	P03GW025	WPNMET1	07/26/91		07/31/91
17299.01	P03GW033	WPNPRG1	07/26/91		08/02/91
17299.03	P03GW033	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17299.04	P03GW033	WPNTPH1	07/26/91		07/30/91
17299.05	P03GW033	WPNMET1	07/26/91		07/31/91
17300.01	P03GW032	WPNPRG1	07/26/91		08/02/91
17300.03	P03GW032	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17300.04	P03GW032	WPNTPH1	07/26/91		07/30/91
17300.05	P03GW032	WPNMET1	07/26/91		07/31/91
17301.01	P03GW031	WPNPRG1	07/26/91		08/02/91
17301.03	P03GW031	WPNP&P1	07/26/91		07/31/91
		WPNPAH1	07/26/91		08/03/91
		WPNPHL1	07/26/91		08/03/91
17301.04	P03GW031	WPNTPH1	07/26/91		08/01/91
17301.05	P03GW031	WPNMET1	07/26/91		07/31/91
17302.01	P03S018A	SPNPRG1	07/26/91		08/02/91
17302.02	P03S018A	SPNTPH1	07/26/91		07/30/91
17302.03	P03S018A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17303.01	P03S019A	SPNPRG1	07/26/91		08/02/91
17303.02	P03S019A	SPNTPH1	07/26/91		07/30/91
17303.03	P03S019A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91
		SPNPHL1	07/26/91		08/06/91
17304.01	P03S008A	SPNPRG1	07/26/91		08/02/91
17304.02	P03S008A	SPNTPH1	07/26/91		07/30/91
17304.03	P03S008A	SPNMET1	07/26/91		07/31/91
		SPNP&P1	07/26/91		07/31/91
		SPNPAH1	07/26/91		08/03/91

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17066 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW023

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	140		10	UG/L
Zinc	64		20	UG/L
Lead	160		40	UG/L
Cadmium	11		5.0	UG/L
Nickel	64		40	UG/L
Copper	72		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17297 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW024

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	78		10	UG/L
Zinc	84		20	UG/L
Lead	1800		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	89		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17298 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW025

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	19		10	UG/L
Zinc	56		20	UG/L
Lead	740		40	UG/L
Cadmium	15		5.0	UG/L
Nickel	ND		40	UG/L
Copper	62		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-16959 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW026  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	31		20	UG/L
Lead	95		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-16960 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW027  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	150		10	UG/L
Zinc	62		20	UG/L
Lead	560		40	UG/L
Cadmium	7.9		5.0	UG/L
Nickel	ND		40	UG/L
Copper	160		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-16961 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW027-DUP.  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	150		10	UG/L
Zinc	75		20	UG/L
Lead	580		40	UG/L
Cadmium	9.5		5.0	UG/L
Nickel	41		40	UG/L
Copper	180		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-16962 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW028  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	24		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-16963 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW029  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	24		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17067 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW030

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND	-	60	UG/L
Chromium	58		10	UG/L
Zinc	33		20	UG/L
Lead	ND		40	UG/L
Cadmium	5.3		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17301 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW031

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	12		10	UG/L
Zinc	ND		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17300 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW032

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	11		10	UG/L
Zinc	30		20	UG/L
Lead	ND		40	UG/L
Cadmium	5.0		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17299 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW033

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	14		10	UG/L
Zinc	ND		20	UG/L
Lead	ND		40	UG/L
Cadmium	7.3		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-16964 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW034  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	25		10	UG/L
Zinc	24		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.824

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(ug/L)

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Parameter	E & E Laboratory No. 91- 17299	Original Value	Amount Added	Amount Determined	Percent Recovery
Arsenic		ND	2000	2100	107
Chromium		14	200	220	105
Zinc		ND	500	480	97
Lead		ND	500	480	95
Cadmium		7.3	50	58	102
Nickel		ND	500	480	96
Copper		ND	250	240	96
Silver		ND	50	48	96

---

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR PRECISION  
RESULTS OF ANALYSIS OF REPLICATE  
ANALYSES OF WATER SAMPLES

9101.824

(ug/L)				
Parameter	E & E Laboratory No. 91- 17299	Original Analysis	Replicate Analysis	Relative Percent Difference (RPD)
Arsenic		ND	ND	NC
Chromium		14	15	4.6
Zinc		ND	ND	NC
Lead		ND	ND	NC
Cadmium		7.3	ND	NC
Nickel		ND	ND	NC
Copper		ND	ND	NC
Silver		ND	ND	NC

ND = NOT DETECTED

NC = NOT CALCULABLE

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, RPD's ARE  
CALCULATED DIRECTLY FROM THE RAW DATA.

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	28		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	ND		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Arsenic	ND		60	UG/L
Chromium	ND		10	UG/L
Zinc	ND		20	UG/L
Lead	ND		40	UG/L
Cadmium	ND		5.0	UG/L
Nickel	ND		40	UG/L
Copper	ND		25	UG/L
Silver	ND		10	UG/L

-----  
 QUALIFIERS: C = COMMENT ND = NOT DETECTED  
 J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
 L = PRESENT BELOW STATED DETECTION LIMIT  
 NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17066 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW023

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17297 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW024

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	10	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17298 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW025

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	11		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

TEST CODE :WPNTPH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC TRPH UNITS : MG/L  
PARAMETER : TRPH

SAMPLE ID	RESULTS	Q	QNT. LIMIT
EE-91-16959			
P03-GW026	7.3		1.0
EE-91-16960			
P03-GW027	5.2		1.0
EE-91-16961			
P03-GW027-DUP.	4.4		1.0
EE-91-16962			
P03-GW028	ND		1.0
EE-91-16963			
P03-GW029	ND		1.0
EE-91-16964			
P03-GW034	ND		1.0
METHOD BLANK	ND		1.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17067 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW030

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17301 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW031

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17300 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW032

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-17299 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW033

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.792

---

(mg/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
T. RECOVERABLE PETROLEUM HYDROCARBONS					
	Batch QC	ND	2.2	2.0	95

---

ND = NOT DETECTED

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.



QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.807

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(mg/L)					
<hr/>					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
<hr/>					
T. Recoverable Petroleum Hydrocarbons					
	Batch QC	ND	1.3	1.2	92

---

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.824

---

(mg/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
<hr/>					
T. Recoverable Petroleum Hydrocarbons					
	Batch QC	ND	1.3	1.2	92
	Batch QC	ND	2.2	2.0	95

---

ND = NOT DETECTED

\*\* = RECOVERY NOT DETERMINED BECAUSE SAMPLE AMOUNT IS FOUR OR MORE  
TIMES GREATER THAN SPIKE AMOUNT.

NOTE: ALTHOUGH RESULTS ARE REPORTED AS ROUNDED VALUES, PERCENT  
RECOVERIES ARE CALCULATED DIRECTLY FROM THE RAW DATA.

TEST CODE :WPNTPH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC TRPH UNITS : MG/L  
PARAMETER : TRPH

SAMPLE ID	RESULTS	Q	QNT. LIMIT
METHOD BLANK 1	ND		1.0

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
TRPH	ND	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

TEST CODE :WPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17066

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW023

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17297

MATRIX: WATER

SAMPLE ID CLIENT: P03GW024

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	810		200
Toluene	ND		200
Ethylbenzene	ND		200
Total Xylenes	1500		200
1,2 - Dichlorobenzene	ND		200
1,3 - Dichlorobenzene	ND		200
1,4 - Dichlorobenzene	ND		200
1,1 - Dichloroethene	ND		200
Methylene Chloride	ND		200
Trans - 1,2 - Dichloroethene	ND		200
1,1 - Dichloroethane	ND		200
1,1,1 - Trichloroethane	ND		200
1,2 - Dichloroethane	ND		200
Trichloroethene	ND		200
Tetrachloroethene	ND		200
Chlorobenzene	ND		200

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17298

MATRIX: WATER

SAMPLE ID CLIENT: P03GW025

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		1000
Toluene	3900		1000
Ethylbenzene	ND		1000
Total Xylenes	2400		1000
1,2 - Dichlorobenzene	ND		1000
1,3 - Dichlorobenzene	ND		1000
1,4 - Dichlorobenzene	ND		1000
1,1 - Dichloroethene	ND		1000
Methylene Chloride	ND		1000
Trans - 1,2 - Dichloroethene	ND		1000
1,1 - Dichloroethane	ND		1000
1,1,1 - Trichloroethane	ND		1000
1,2 - Dichloroethane	ND		1000
Trichloroethene	ND		1000
Tetrachloroethene	ND		1000
Chlorobenzene	ND		1000

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16959

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW026

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		50
Toluene	ND		50
Ethylbenzene	ND		50
Total Xylenes	220		50
1,2 - Dichlorobenzene	ND		50
1,3 - Dichlorobenzene	ND		50
1,4 - Dichlorobenzene	ND		50
1,1 - Dichloroethene	ND		50
Methylene Chloride	ND		50
Trans - 1,2 - Dichloroethene	ND		50
1,1 - Dichloroethane	ND		50
1,1,1 - Trichloroethane	ND		50
1,2 - Dichloroethane	ND		50
Trichloroethene	ND		50
Tetrachloroethene	ND		50
Chlorobenzene	ND		50

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : WPNPRG1

JOB NUMBER : 9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16960

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW027

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		500
Toluene	ND		500
Ethylbenzene	ND		500
Total Xylenes	1400		500
1,2 - Dichlorobenzene	ND		500
1,3 - Dichlorobenzene	ND		500
1,4 - Dichlorobenzene	ND		500
1,1 - Dichloroethene	ND		500
Methylene Chloride	ND		500
Trans - 1,2 - Dichloroethene	ND		500
1,1 - Dichloroethane	ND		500
1,1,1 - Trichloroethane	ND		500
1,2 - Dichloroethane	ND		500
Trichloroethene	ND		500
Tetrachloroethene	ND		500
Chlorobenzene	ND		500

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16961

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW027-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		500
Toluene	ND		500
Ethylbenzene	ND		500
Total Xylenes	1600		500
1,2 - Dichlorobenzene	ND		500
1,3 - Dichlorobenzene	ND		500
1,4 - Dichlorobenzene	ND		500
1,1 - Dichloroethene	ND		500
Methylene Chloride	ND		500
Trans - 1,2 - Dichloroethene	ND		500
1,1 - Dichloroethane	ND		500
1,1,1 - Trichloroethane	ND		500
1,2 - Dichloroethane	ND		500
Trichloroethene	ND		500
Tetrachloroethene	ND		500
Chlorobenzene	ND		500

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16962

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW028

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PURGABLES- GC UNITS : UG/L  
SAMPLE ID LAB : EE-91-16963 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW029  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		200
Toluene	ND		200
Ethylbenzene	ND		200
Total Xylenes	1200		200
1,2 - Dichlorobenzene	ND		200
1,3 - Dichlorobenzene	ND		200
1,4 - Dichlorobenzene	ND		200
1,1 - Dichloroethene	ND		200
Methylene Chloride	ND		200
Trans - 1,2 - Dichloroethene	ND		200
1,1 - Dichloroethane	ND		200
1,1,1 - Trichloroethane	ND		200
1,2 - Dichloroethane	ND		200
Trichloroethene	ND		200
Tetrachloroethene	ND		200
Chlorobenzene	ND		200

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : WPNPRG1

JOB NUMBER : 9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17067

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW030

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17301

MATRIX: WATER

SAMPLE ID CLIENT: P03GW031

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17300

MATRIX: WATER

SAMPLE ID CLIENT: P03GW032

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17299

MATRIX: WATER

SAMPLE ID CLIENT: P03GW033

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16964

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW034

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
 PERCENT RECOVERY OF WATER MATRIX SPIKE (MS)  
 (Sample # Blank Spike)

9101.792

(ug/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzene		ND	20	20	100
Toluene		ND	20	18	90
Ethyl Benzene		ND	20	19	95
1,2-Dichlorobenzene		ND	20	18	90
1,3-Dichlorobenzene		ND	20	18	90
1,4-Dichlorobenzene		ND	20	19	95
1,1-Dichloroethene		ND	20	15	75
Methylene Chloride		ND	20	20	100
Trans-1,2-Dichloroethene		ND	20	18	90
1,1-Dichloroethane		ND	20	19	95
1,1,1-Trichloroethane		ND	20	20	100
1,2-Dichloroethane		ND	20	21	105
Trichloroethene		ND	20	20	100
Tetrachloroethene		ND	20	21	105

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
 PERCENT RECOVERY OF WATER MATRIX SPIKE (MS)  
 (Sample # Blank Spike)

9101.792

(ug/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzene		ND	20	18	90
Toluene		ND	20	19	95
Ethyl Benzene		ND	20	19	95
1,2-Dichlorobenzene		ND	20	22	110
1,3-Dichlorobenzene		ND	20	19	95
1,4-Dichlorobenzene		ND	20	20	100
1,1-Dichloroethene		ND	20	31	155
Methylene Chloride		ND	20	15	75
Trans-1,2-Dichloroethene		ND	20	15	75
1,1-Dichloroethane		ND	20	20	100
1,1,1-Trichloroethane		ND	20	18	90
1,2-Dichloroethane		ND	20	22	110
Trichloroethene		ND	20	21	105
Tetrachloroethene		ND	20	21	105

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
 PERCENT RECOVERY OF WATER MATRIX SPIKE (MS)  
 (Sample # Blank Spike)

9101.807

(ug/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzene		ND	20	19	95
Toluene		ND	20	18	90
Ethyl Benzene		ND	20	18	90
1,2-Dichlorobenzene		ND	20	14	70
1,3-Dichlorobenzene		ND	20	14	70
1,4-Dichlorobenzene		ND	20	15	75
1,1-Dichloroethene		ND	20	22	110
Methylene Chloride		ND	20	17	85
Trans-1,2-Dichloroethene		ND	20	17	85
1,1-Dichloroethane		ND	20	14	70
1,1,1-Trichloroethane		ND	20	19	95
1,2-Dichloroethane		ND	20	20	100
Trichloroethene		ND	20	20	100
Tetrachloroethene		ND	20	20	100

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY AND PRECISION:  
 PERCENT RECOVERY OF WATER MATRIX SPIKE (MS)  
 (Sample # Blank Spike)

9101.807

(ug/L)					
Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzene		ND	20	18	90
Toluene		ND	20	16	80
Ethyl Benzene		ND	20	16	80
1,2-Dichlorobenzene		ND	20	14	70
1,3-Dichlorobenzene		ND	20	13	65
1,4-Dichlorobenzene		ND	20	14	70
1,1-Dichloroethene		ND	20	18	90
Methylene Chloride		ND	20	21	105
Trans-1,2-Dichloroethene		ND	20	21	105
1,1-Dichloroethane		ND	20	14	70
1,1,1-Trichloroethane		ND	20	18	90
1,2-Dichloroethane		ND	20	18	90
Trichloroethene		ND	20	18	90
Tetrachloroethene		ND	20	18	90

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.792

---

Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	16959	77
	16960	83
	16961	75
	16962	75
	16963	71
	16964	71
	Method Blank #1	100
	Method Blank #2	74
1,4-Dichlorobutane	16959	118
	16960	107
	16961	102
	16962	120
	16963	123
	16964	107
	Method Blank #1	100
	Method Blank #2	106

---

QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.807

---

Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	17066	83
	17067	83
	Method Blank	75
1,4-Dichlorobutane	17066	119
	17067	115
	Method Blank	106

---



QUALITY CONTROL FOR ACCURACY: PERCENT  
RECOVERY OF SURROGATE SPIKES

9101.824

---

Compound	E & E Laboratory No. 91-	Percent Recovery
<hr/>		
Trifluorotoluene	17297	75
	17298	104
	17299	88
	17300	96
	17301	92
	Method Blank #1	100
	Method Blank #2	100
1,4-Dichlorobutane	17297	116
	17298	92
	17299	102
	17300	106
	17301	101
	Method Blank #1	100
	Method Blank #2	100

---

TEST CODE :WPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK 1

MATRIX: WATER

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK 2

MATRIX: WATER

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : WPNPRG1

JOB NUMBER : 9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK #1

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPRG1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PURGABLES- GC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK #2

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Benzene	ND		10
Toluene	ND		10
Ethylbenzene	ND		10
Total Xylenes	ND		10
1,2 - Dichlorobenzene	ND		10
1,3 - Dichlorobenzene	ND		10
1,4 - Dichlorobenzene	ND		10
1,1 - Dichloroethene	ND		10
Methylene Chloride	ND		10
Trans - 1,2 - Dichloroethene	ND		10
1,1 - Dichloroethane	ND		10
1,1,1 - Trichloroethane	ND		10
1,2 - Dichloroethane	ND		10
Trichloroethene	ND		10
Tetrachloroethene	ND		10
Chlorobenzene	ND		10

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17066

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW023

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17297

MATRIX: WATER

SAMPLE ID CLIENT: P03GW024

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	200	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17298

MATRIX: WATER

SAMPLE ID CLIENT: P03GW025

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	120	-	100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16959

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW026

SAMPLE LOCATION :

PARAMETER

RESULTS

Q

QNT. LIMIT

-----  
Total as Benzo-a-pyrene

-----  
PRESENT

-----  
L

-----  
100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PAH - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-16960 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW027  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16961

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW027-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PAH - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-16962 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW028  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : WPNPAH1

JOB NUMBER : 9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16963

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW029

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17067

MATRIX: WATER

SAMPLE ID CLIENT: PO3-GWO30

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND		100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17301

MATRIX: WATER

SAMPLE ID CLIENT: P03GW031

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17300

MATRIX: WATER

SAMPLE ID CLIENT: P03GW032

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17299

MATRIX: WATER

SAMPLE ID CLIENT: P03GW033

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PAH - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-16964 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW034  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.792

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene	Batch QC	ND	50	41	82

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.807

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene					
	17067 MS	ND	50	30	60

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.824

(ug)

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
Benzo(a)pyrene	17301 MS	ND	50	37	74

ND = NOT DETECTED

TEST CODE :WPNPAH1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK 598/169 MATRIX: WATER

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPAH1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Benzo-a-pyrene	ND	-	100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNPAH1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PAH - LC

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
-----	-----	-	-----
Total as Benzo-a-pyrene	ND		100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17066

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW023

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-17297 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW024

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	1400	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-17298 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW025

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	3700	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-16959 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW026  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE : WPNPHL1

JOB NUMBER : 9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16960

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW027

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	800	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC UNITS : UG/L

SAMPLE ID LAB : EE-91-16961 MATRIX: WATER

SAMPLE ID CLIENT: P03-GW027-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	930		100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC UNITS : UG/L

SAMPLE ID LAB : EE-91-16962 MATRIX: WATER

SAMPLE ID CLIENT: P03-GW028

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC UNITS : UG/L

SAMPLE ID LAB : EE-91-16963 MATRIX: WATER

SAMPLE ID CLIENT: P03-GW029

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	200		100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17067

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW030

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-17301 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW031

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : EE-91-17300 MATRIX: WATER  
SAMPLE ID CLIENT: P03GW032

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-17299

MATRIX: WATER

SAMPLE ID CLIENT: P03GW033

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		100

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC

UNITS : UG/L

SAMPLE ID LAB : EE-91-16964

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW034

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.972

---

( ug )

---

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
2,4,6-Trichlorophenol					
	Blank	ND	100	62	62

---

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.807

( ug )

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
2,4,6-Trichlorophenol					
	17066 MS	ND	100	74	74

ND = NOT DETECTED



QUALITY CONTROL FOR ACCURACY: PERCENT RECOVERY  
FOR SPIKED WATER SAMPLES

9101.824

( ug )

Parameter	E & E Laboratory No. 91-	Original Value	Amount Added	Amount Determined	Percent Recovery
2,4,6-Trichlorophenol					
	Blank Spike	ND	100	95	95

ND = NOT DETECTED

TEST CODE :WPNPHL1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : METHOD BLANK 600/96 MATRIX: WATER  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PHENOL - LC UNITS : UG/L  
SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND	-	100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNPHL1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PHENOL - LC UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Total as Trichlorophenol	ND		100

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17066

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW023

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17297

MATRIX: WATER

SAMPLE ID CLIENT: P03GW024

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17298

MATRIX: WATER

SAMPLE ID CLIENT: P03GW025

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
TEST NAME : PNC PEST./PCB UNITS : UG/L  
SAMPLE ID LAB : EE-91-16959 MATRIX: WATER  
SAMPLE ID CLIENT: P03-GW026  
SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-16960

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW027

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-16961

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW027-DUP.

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-16962

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW028

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-16963

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW029

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17067

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW030

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17301

MATRIX: WATER

SAMPLE ID CLIENT: P03GW031

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17300

MATRIX: WATER

SAMPLE ID CLIENT: P03GW032

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-17299

MATRIX: WATER

SAMPLE ID CLIENT: P03GW033

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT



TEST CODE :WPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : EE-91-16964

MATRIX: WATER

SAMPLE ID CLIENT: P03-GW034

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

QUALITY CONTROL FOR ACCURACY:  
PERCENT RECOVERY OF WATER MATRIX SPIKE  
(Sample # BATCH QC)

9101.792

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/L)				
Heptachlor	ND	2.0	1.21	60
Lindane	ND	2.0	2.02	101
Aldrin	ND	2.0	1.22	61
4,4'-DDT	ND	5.0	2.47	49
Dieldrin	ND	5.0	5.10	102
Endrin	ND	5.0	4.97	99
PCB-1254	ND	25.0	18.5	74

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY:  
PERCENT RECOVERY OF WATER MATRIX SPIKE  
(Sample # 10767)

9101.807

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/L)				
Heptachlor	ND	2.0	2.15	108
Lindane	ND	2.0	2.16	108
Aldrin	ND	2.0	2.30	115
4,4'-DDT	ND	5.0	5.09	102
Dieldrin	ND	5.0	5.78	116
Endrin	ND	5.0	6.03	121
PCB-1254	ND	25.0	24.2	97

ND = NOT DETECTED

QUALITY CONTROL FOR ACCURACY:  
PERCENT RECOVERY OF WATER MATRIX SPIKE  
(Sample # 17301)

9101.824

Compound	Original Result	Amount Added	Amount Determined	Percent Recovery
(ug/L)				
Heptachlor	ND	2.0	1.83	92
Lindane	ND	2.0	1.97	98
Aldrin	ND	2.0	1.83	92
4,4'-DDT	ND	5.0	4.09	82
Dieldrin	ND	5.0	5.32	106
Endrin	ND	5.0	5.42	108
PCB-1254	ND	25.0	24.85	99

ND = NOT DETECTED

TEST CODE :WPNP&P1

JOB NUMBER :9101.792

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK 598/170 MATRIX: WATER

SAMPLE LOCATION :

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.807

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

TEST CODE :WPNP&P1

JOB NUMBER :9101.824

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2

TEST NAME : PNC PEST./PCB

UNITS : UG/L

SAMPLE ID LAB : METHOD BLANK

MATRIX: WATER

PARAMETER	RESULTS	Q	QNT. LIMIT
Heptachlor	ND		5.0
Lindane	ND		5.0
Aldrin	ND		5.0
4,4 - DDT	ND		5.0
Dieldrin	ND		5.0
Endrin	ND		5.0
Chlordane	ND		5.0
4,4-DDE	ND		5.0
Total PCBs	ND		10

-----  
QUALIFIERS: C = COMMENT

ND = NOT DETECTED

J = ESTIMATED VALUE

B = ALSO PRESENT IN BLANK

L = PRESENT BELOW STATED DETECTION LIMIT

APPENDIX K

EXISTING PERMANENT MONITORING WELL  
GROUNDWATER SAMPLING ANALYTICAL RESULTS



M E M O R A N D U M

TO: John Barksdale

FROM: Gary Hahn G. Hahn / TB

DATE: June 12, 1991

SUBJECT: NASP Well Resampling

REF: 9101.052

CC: Lab File

Attached is the laboratory report of the analysis conducted on eight sample received at the Analytical Services Center on May 04, 1991. Analysis was performed according to the "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, Third Edition, U.S.EPA. USEPA Contract Laboratory Program, Statement of Work for Organic Analysis, 2/88 and Statement of Work for Inorganic Analysis, 7/88.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report, unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of \$1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/bjh  
enclosure

Based on the amount of mass spectral information available, the GC/MS computer is not always able to supply three matches for the unknown.

Sample WPB06 was analyzed for volatile organics at 15:07 on 05/13/91. This analysis was not completed within the 12 hour time clock which ended at 15:21.

Volatile surrogate recovery criterion was not met for WFB06. The sample also contained methylene chloride at a level which exceeded the instrument's calibrated range. It was reanalyzed at a greater dilution, two days after CLP hold time had expired. Surrogate recoveries in this reanalysis were acceptable. Results from both analyses are included.

% D criterion was not met for 1,2-dichloropropane in the calibration standard D2437 analyzed on 05/13/91. That compound was not detected in any of the associated samples. Therefore data quality has not been jeopardized.

Carbon disulfide was detected in several volatile samples. This is believed to be a laboratory artifact and not native to the samples. The samples in question were reanalyzed outside of CLP hold time with no carbon disulfide detected.

Semi-volatile surrogate recovery criterion was not met for the method blank SBLKW1. Since recoveries were acceptable for all associated samples, no reanalysis was performed.

The pesticide sample identified as MSB2 is the blank spike.


The EVALB pesticide standard analyzed at 17:23 on 05/22/91 contained carryover. The standard was immediately reanalyzed.

All iron values reported have been flagged "E" based on serial dilution results. A chemical/physical interferent is suspected.

Standard recovery criterion was not met for iron analyzed at 11:23 on 05/16/91 and for lead analyzed at 9:48 on 05/22/91. Since the lead standard was prior to MSA analysis, data quality is not affected.

A final standard and calibration blank were not analyzed during the 05/15/91 cyanide sequence. Initial standard and blank analyses were acceptable.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.



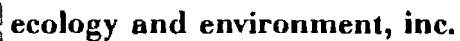
Gary Hahn  
Manager - Analytical Services Center

Date 06/14/91

GH/bjh

E & E JOB NUMBER: 9101.052

<u>CLIENT SAMPLE ID</u>	<u>LAB SAMPLE ID</u>	<u>ID USED IN REPORT</u>
P-03-W021	10143	W021
P-03-W023	10144	W023
P-03-W024	10145	W024
P-03-W025	10146	W025
P-03-W025D	10147	W025D
P-03-WFB06	10148	WFB06
P-03-WRB06	10149	WRB06
P-03-WPB06	10150	WPB06
P-03-WTB06	10151	WTB06
P-03-W021-DISS	10152	W021 DISS
P-03-W023-DISS	10153	W023 DISS
P-03-W024-DISS	10154	W024 DISS
P-03-W025-DISS	10155	W025 DISS
P-03-W025D-DISS	10156	W025D DISS
P-03-WFB06-DISS	10157	WFB06 DISS
P-03-WRB06-DISS	10158	WRB06 DISS



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ALL ANALYSES FOLLOW  
CLP PROTOCOL

### CHAIN-OF-CUSTODY RECORD

STATION NUMBER		DATE	TIME	SAMPLE TYPE			SAMPLE INFORMATION		STATION LOCATION	NUMBER OF CON. TAINERS	ANALYSIS										REMARKS																																																																																																																																																																																																																																																																			
		1991		COMP	GRAB	AIR	EXPECTED COMPOUNDS (Concentration)*				TPHs	TOL	TOL 200s	TOL 400s	TOL 600s	TOL 800s	TOL 1000s	TOL 1500s	TOL 2000s	TOL 3000s	TOL 4000s	TOL 5000s	TOL 6000s	TOL 7000s	TOL 8000s	TOL 9000s	TOL 10000s	TOL 11000s	TOL 12000s	TOL 13000s	TOL 14000s	TOL 15000s	TOL 16000s	TOL 17000s	TOL 18000s	TOL 19000s	TOL 20000s	TOL 21000s	TOL 22000s	TOL 23000s	TOL 24000s	TOL 25000s	TOL 26000s	TOL 27000s	TOL 28000s	TOL 29000s	TOL 30000s	TOL 31000s	TOL 32000s	TOL 33000s	TOL 34000s	TOL 35000s	TOL 36000s	TOL 37000s	TOL 38000s	TOL 39000s	TOL 40000s	TOL 41000s	TOL 42000s	TOL 43000s	TOL 44000s	TOL 45000s	TOL 46000s	TOL 47000s	TOL 48000s	TOL 49000s	TOL 50000s	TOL 51000s	TOL 52000s	TOL 53000s	TOL 54000s	TOL 55000s	TOL 56000s	TOL 57000s	TOL 58000s	TOL 59000s	TOL 60000s	TOL 61000s	TOL 62000s	TOL 63000s	TOL 64000s	TOL 65000s	TOL 66000s	TOL 67000s	TOL 68000s	TOL 69000s	TOL 70000s	TOL 71000s	TOL 72000s	TOL 73000s	TOL 74000s	TOL 75000s	TOL 76000s	TOL 77000s	TOL 78000s	TOL 79000s	TOL 80000s	TOL 81000s	TOL 82000s	TOL 83000s	TOL 84000s	TOL 85000s	TOL 86000s	TOL 87000s	TOL 88000s	TOL 89000s	TOL 90000s	TOL 91000s	TOL 92000s	TOL 93000s	TOL 94000s	TOL 95000s	TOL 96000s	TOL 97000s	TOL 98000s	TOL 99000s	TOL 100000s	TOL 101000s	TOL 102000s	TOL 103000s	TOL 104000s	TOL 105000s	TOL 106000s	TOL 107000s	TOL 108000s	TOL 109000s	TOL 110000s	TOL 111000s	TOL 112000s	TOL 113000s	TOL 114000s	TOL 115000s	TOL 116000s	TOL 117000s	TOL 118000s	TOL 119000s	TOL 120000s	TOL 121000s	TOL 122000s	TOL 123000s	TOL 124000s	TOL 125000s	TOL 126000s	TOL 127000s	TOL 128000s	TOL 129000s	TOL 130000s	TOL 131000s	TOL 132000s	TOL 133000s	TOL 134000s	TOL 135000s	TOL 136000s	TOL 137000s	TOL 138000s	TOL 139000s	TOL 140000s	TOL 141000s	TOL 142000s	TOL 143000s	TOL 144000s	TOL 145000s	TOL 146000s	TOL 147000s	TOL 148000s	TOL 149000s	TOL 150000s	TOL 151000s	TOL 152000s	TOL 153000s	TOL 154000s	TOL 155000s	TOL 156000s	TOL 157000s	TOL 158000s	TOL 159000s	TOL 160000s	TOL 161000s	TOL 162000s	TOL 163000s	TOL 164000s	TOL 165000s	TOL 166000s	TOL 167000s	TOL 168000s	TOL 169000s	TOL 170000s	TOL 171000s	TOL 172000s	TOL 173000s	TOL 174000s	TOL 175000s	TOL 176000s	TOL 177000s	TOL 178000s	TOL 179000s	TOL 180000s	TOL 181000s	TOL 182000s	TOL 183000s	TOL 184000s	TOL 185000s	TOL 186000s	TOL 187000s	TOL 188000s	TOL 189000s	TOL 190000s	TOL 191000s	TOL 192000s	TOL 193000s	TOL 194000s	TOL 195000s	TOL 196000s	TOL 197000s	TOL 198000s	TOL 199000s	TOL 200000s	TOL 201000s	TOL 202000s	TOL 203000s	TOL 204000s	TOL 205000s	TOL 206000s	TOL 207000s	TOL 208000s	TOL 209000s	TOL 210000s	TOL 211000s	TOL 212000s	TOL 213000s	TOL 214000s	TOL 215000s	TOL 216000s	TOL 217000s	TOL 218000s	TOL 219000s	TOL 220000s	TOL 221000s	TOL 222000s	TOL 223000s	TOL 224000s	TOL 225000s	TOL 226000s	TOL 227000s	TOL 228000s	TOL 229000s	TOL 230000s	TOL 231000s	TOL 232000s	TOL 233000s	TOL 234000s	TOL 235000s	TOL 236000s	TOL 237000s	TOL 238000s	TOL 239000s	TOL 240000s	TOL 241000s	TOL 242000s	TOL 243000s	TOL 244000s	TOL 245000s	TOL 246000s	TOL 247000s	TOL 248000s	TOL 249000s	TOL 250000s	TOL 251000s	TOL 252000s	TOL 253000s	TOL 254000s	TOL 255000s	TOL 256000s	TOL 257000s	TOL 258000s	TOL 259000s	TOL 260000s	TOL 261000s	TOL 262000s	TOL 263000s

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

\* See CONCENTRATION RANGE on back of form.

234053



*[Handwritten notes:]*

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\* \* \* COLD METALS \* \* \*

\* \* \* METALS \* HARDNESS \* \* \*

Page 1

Page 1 of 1

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files  
\*See CONCENTRATION RANGE on back of form.



308 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/684-8000  
International Specialists in the Environment

ALL ANALYSES FOLLOW  
CLP PROTOCOL

## Page 1 of 1

[illegible]

\*See CONCENTRATION RANGE on back of form.

214060



\* PCBs \* METALS \* \* HARDNESS \* \*

Page 1 of 1

234041

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W021

Lab Name: ECOLOGY\_AND\_ENVIRONMENT\_\_ Contract: \_\_\_\_\_

Lab Code: EANDE\_\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_\_

Matrix (soil/water): WATER

Lab Sample ID: 10143\_\_

Level (low/med): LOW\_\_

Date Received: 05/04/91

% Solids: \_\_\_\_0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	306			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	20.7	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	8190			P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	6.4	B		P
7440-50-8	Copper	2.8	B		P
7439-89-6	Iron	897		E	P
7439-92-1	Lead	2.3	B		F
7439-95-4	Magnesium	1700	B		P
7439-96-5	Manganese	11.3	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	12.7	B		P
7440-09-7	Potassium	3060	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	5770			P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	5.4	B		P
7440-66-6	Zinc	17.2	B		P
	Cyanide	10.0	U		AS

Color Before: Y\_\_

Clarity Before: C\_\_

Texture: \_\_\_\_\_

Color After: CL\_\_

Clarity After: C\_\_

Artifacts: \_\_\_\_\_

Comments:



1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: ECOLOGY\_AND\_ENVIRONMENT Contract: \_\_\_\_\_

W021

~~DISSOLVED~~

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_

Matrix (soil/water): WATER

Lab Sample ID: 10152\_

Level (low/med): LOW\_

Date Received: 05/04/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	103	B		P
7440-36-0	Antimony	52.6	B		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	20.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	8510			P
7440-47-3	Chromium	14.3		*	P
7440-48-4	Cobalt	10.5	B		P
7440-50-8	Copper	15.2	B		P
7439-89-6	Iron	621		E	P
7439-92-1	Lead	1.0	U	W	F
7439-95-4	Magnesium	1790	B		P
7439-96-5	Manganese	14.4	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	4190	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	6280			P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	6.9	B		P
7440-66-6	Zinc	19.4	B		P
	Cyanide				NR

Color Before: CL\_ Clarity Before: C\_ Texture: \_\_\_\_\_

Color After: CL\_ Clarity After: C\_ Artifacts: \_\_\_\_\_

Comments:

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W023

Lab Name: ECOLOGY\_AND\_ENVIRONMENT\_\_ Contract: \_\_\_\_\_

Lab Code: EANDE\_\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_\_

Matrix (soil/water): WATER

Lab Sample ID: 10144\_\_

Level (low/med): LOW\_\_

Date Received: 05/04/91

% Solids: \_\_0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3820			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	9.6	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.9	B		P
7440-70-2	Calcium	1060	B		P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	8.1	B		P
7440-50-8	Copper	3.5	B		P
7439-89-6	Iron	643		E	P
7439-92-1	Lead	1.7	B		F
7439-95-4	Magnesium	730	B		P
7439-96-5	Manganese	6.2	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	1120	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	3000	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	8.0	B		P
7440-66-6	Zinc	17.6	B		P
	Cyanide	10.0	U		AS

Color Before: BR\_\_

Clarity Before: CL\_\_

Texture: \_\_\_\_\_

Color After: Y\_\_

Clarity After: C\_\_

Artifacts: \_\_\_\_\_

Comments:

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1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: ECOLOGY\_AND\_ENVIRONMENT Contract: \_\_\_\_\_

W023

DISSOLVED

Lab Code: EANDE\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_

Matrix (soil/water): WATER

Lab Sample ID: 10153\_

Level (low/med): LOW\_

Date Received: 05/04/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	158	B		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	5.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	1060	B		P
7440-47-3	Chromium	35.9		*	P
7440-48-4	Cobalt	9.5	B		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	298		E	P
7439-92-1	Lead	2.1	B		F
7439-95-4	Magnesium	659	B		P
7439-96-5	Manganese	11.0	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	14.5	B		P
7440-09-7	Potassium	1410	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	3100	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	7.2	B		P
7440-66-6	Zinc	11.3	B		P
	Cyanide				NR

Color Before: CL\_ Clarity Before: C\_ Texture: \_\_\_\_\_

Color After: CL\_ Clarity After: C\_ Artifacts: \_\_\_\_\_

Comments:

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## U.S. EPA - CLP

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W024

Lab Name: ECOLOGY\_AND\_ENVIRONMENT\_\_ Contract: \_\_\_\_\_

Lab Code: EANDE\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_

Matrix (soil/water): WATER

Lab Sample ID: 10145\_\_\_\_\_

Level (low/med): LOW\_\_

Date Received: 05/04/91

% Solids: \_\_\_\_0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2470			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	5.7	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	753	B		P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	7.6	B		P
7440-50-8	Copper	3.0	B		P
7439-89-6	Iron	1420		E	P
7439-92-1	Lead	8.7			F
7439-95-4	Magnesium	933	B		P
7439-96-5	Manganese	13.3	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	263	U		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	3400	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	6.2	B		P
7440-66-6	Zinc	13.8	B		P
	Cyanide	10.0	U		AS

Color Before: CL\_\_\_\_\_

Clarity Before: CL\_\_\_\_\_

Texture: \_\_\_\_\_

Color After: CL\_\_\_\_\_

Clarity After: C\_\_\_\_\_

Artifacts: \_\_\_\_\_

Comments:

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

b Name: ECOLOGY\_AND\_ENVIRONMENT\_\_ Contract: \_\_\_\_\_

W024  
**DISSOLVED**

Lab Code: EANDE\_\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_\_

Matrix (soil/water): WATER Lab Sample ID: 10154\_\_

Level (low/med): LOW\_\_ Date Received: 05/04/91

% Solids: \_\_0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	91.3	B		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	5.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	762	B		P
7440-47-3	Chromium	63.9		*	P
7440-48-4	Cobalt	12.4	B		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	283		E	P
7439-92-1	Lead	2.7	B		F
7439-95-4	Magnesium	914	B		P
7439-96-5	Manganese	18.3			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	16.0	B		P
7440-09-7	Potassium	1140	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	3290	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	6.8	B		P
7440-66-6	Zinc	4.3	B		P
	Cyanide				NR

Color Before: CL\_\_ Clarity Before: C\_\_ Texture: \_\_\_\_\_

Color After: CL\_\_ Clarity After: C\_\_ Artifacts: \_\_\_\_\_

Comments:

## U.S. EPA - CLP

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W025

Lab Name: ECOLOGY\_AND\_ENVIRONMENT Contract: \_\_\_\_\_

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_

Matrix (soil/water): WATER Lab Sample ID: 10146\_\_\_\_\_

Level (low/med): LOW Date Received: 05/04/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	228			P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	6.9	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.4	B		P
7440-70-2	Calcium	2940	B		P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	7.9	B		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	619		E	P
7439-92-1	Lead	2.3	B		F
7439-95-4	Magnesium	955	B		P
7439-96-5	Manganese	5.4	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	263	U		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	4120	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	7.0	B		P
7440-66-6	Zinc	10.2	B		P
	Cyanide	10.0	U		AS

Color Before: CL Clarity Before: C Texture: \_\_\_\_\_

Color After: CL Clarity After: C Artifacts: \_\_\_\_\_

Comments:

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

b Name: ECOLOGY\_AND\_ENVIRONMENT\_\_ Contract: \_\_\_\_\_

W025  
DISSOLVED

Lab Code: EANDE\_\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_\_

Matrix (soil/water): WATER

Lab Sample ID: 10155\_\_

Level (low/med): LOW\_\_

Date Received: 05/04/91

% Solids: \_\_0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	142	B		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	5.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	4.2	B		P
7440-70-2	Calcium	3020	B		P
7440-47-3	Chromium	81.6		*	P
7440-48-4	Cobalt	11.0	B		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	758		E	P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	978	B		P
7439-96-5	Manganese	13.2	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	17.7	B		P
7440-09-7	Potassium	920	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	4230	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	7.7	B		P
7440-66-6	Zinc	4.2	B		P
	Cyanide				NR

Color Before: CL\_\_ Clarity Before: C\_\_ Texture: \_\_

Color After: CL\_\_ Clarity After: C\_\_ Artifacts: \_\_

Comments:

## U.S. EPA - CLP

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

W025D

Lab Name: ECOLOGY\_AND\_ENVIRONMENT\_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: EANDE\_\_\_\_\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_\_\_\_\_

Matrix (soil/water): WATER\_\_\_\_\_ Lab Sample ID: 10147\_\_\_\_\_

Level (low/med): LOW\_\_\_\_\_ Date Received: 05/04/91

% Solids: \_\_\_\_\_0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_\_\_\_\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	224	—	—	P
7440-36-0	Antimony	33.0	U	—	P
7440-38-2	Arsenic	2.0	U	—	F
7440-39-3	Barium	5.6	B	—	P
7440-41-7	Beryllium	1.0	U	—	P
7440-43-9	Cadmium	4.0	B	—	P
7440-70-2	Calcium	2790	B	—	P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	8.5	B	—	P
7440-50-8	Copper	2.0	U	—	P
7439-89-6	Iron	618	—	E	P
7439-92-1	Lead	5.0	—	S	F
7439-95-4	Magnesium	978	B	—	P
7439-96-5	Manganese	5.5	B	—	P
7439-97-6	Mercury	0.20	U	—	CV
7440-02-0	Nickel	8.0	U	—	P
7440-09-7	Potassium	263	U	—	P
7782-49-2	Selenium	2.0	U	—	F
7440-22-4	Silver	3.0	U	—	P
7440-23-5	Sodium	3920	B	—	P
7440-28-0	Thallium	3.0	U	—	F
7440-62-2	Vanadium	5.3	B	—	P
7440-66-6	Zinc	19.5	B	—	P
_____	Cyanide	10.0	U	—	C

Color Before: CL\_\_\_\_\_ Clarity Before: C\_\_\_\_\_ Texture: \_\_\_\_\_

Color After: CL\_\_\_\_\_ Clarity After: C\_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:



## INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: ECOLOGY AND ENVIRONMENT Contract: \_\_\_\_\_

W025D

DISSOLVED

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06

Matrix (soil/water): WATER

Lab Sample ID: 10156

Level (low/med): LOW

Date Received: 05/04/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	166	B		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	5.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	2830	B		P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	480		E	P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	985	B		P
7439-96-5	Manganese	4.5	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	263	U		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	4020	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	8.2	B		P
	Cyanide				NR

Color Before: CL \_\_\_\_\_ Clarity Before: C \_\_\_\_\_ Texture: \_\_\_\_\_

Color After: CL \_\_\_\_\_ Clarity After: C \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

WFB06

Lab Name: ECOLOGY\_AND\_ENVIRONMENT Contract: \_\_\_\_\_

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_

Matrix (soil/water): WATER Lab Sample ID: 10148\_\_\_\_\_

Level (low/med): LOW Date Received: 05/04/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14.0	U		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	5.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	95.0	U		P
7440-47-3	Chromium	10.5		*	P
7440-48-4	Cobalt	11.1	B		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	265		E	P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	108	U		P
7439-96-5	Manganese	3.1	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	13.1	B		P
7440-09-7	Potassium	263	U		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	264	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	5.1	B		P
7440-66-6	Zinc	17.4	B		P
	Cyanide	10.0	U		C

Color Before: CL Clarity Before: C Texture: \_\_\_\_\_

Color After: CL Clarity After: C Artifacts: \_\_\_\_\_

Comments:

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1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: ECOLOGY\_AND\_ENVIRONMENT Contract: \_\_\_\_\_

WFB06

DISSOLVED

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06

Matrix (soil/water): WATER

Lab Sample ID: 10157

Level (low/med): LOW

Date Received: 05/04/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20.1	B		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	5.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	114	B		P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.7	B		P
7439-89-6	Iron	20.8	B	E	P
7439-92-1	Lead	1.0	U	W	F
7439-95-4	Magnesium	108	U		P
7439-96-5	Manganese	2.0	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	263	U		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	403	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	4.7	B		P
	Cyanide				NR

Color Before: CL Clarity Before: C Texture: \_\_\_\_\_

Color After: CL Clarity After: C Artifacts: \_\_\_\_\_

Comments:

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

WRB06

Lab Name: ECOLOGY\_AND\_ENVIRONMENT Contract: \_\_\_\_\_

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06

Matrix (soil/water): WATER Lab Sample ID: 10149

Level (low/med): LOW Date Received: 05/04/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14.0	U		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U	M	F
7440-39-3	Barium	5.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	95.0	U		P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	9.7	B		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	68.9	B	E	P
7439-92-1	Lead	1.0	U	W	F
7439-95-4	Magnesium	108	U		P
7439-96-5	Manganese	1.8	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	263	U		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	182	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	4.9	B		P
7440-66-6	Zinc	9.7	B		P
	Cyanide	10.0	U		C

Color Before: CL Clarity Before: C Texture: \_\_\_\_\_

Color After: CL Clarity After: C Artifacts: \_\_\_\_\_

Comments:

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: ECOLOGY AND ENVIRONMENT Contract: \_\_\_\_\_

 WRB06  
 DISSOLVED

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06

Matrix (soil/water): WATER

Lab Sample ID: 10158

Level (low/med): LOW

Date Received: 05/04/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14.0	U		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	5.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	95.0	U		P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	2.0	U		P
7439-89-6	Iron	39.7	B	E	P
7439-92-1	Lead	1.0	U		F
7439-95-4	Magnesium	108	U		P
7439-96-5	Manganese	1.3	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	263	U		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	213	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	4.0	U		P
7440-66-6	Zinc	10.3	B		P
	Cyanide				NR

Color Before: CL

Clarity Before: C

Texture: \_\_\_\_\_

Color After: CL

Clarity After: C

Artifacts: \_\_\_\_\_

Comments:

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

WPB06

Lab Name: ECOLOGY\_AND\_ENVIRONMENT\_\_ Contract: \_\_\_\_\_

Lab Code: EANDE\_\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_\_

Matrix (soil/water): WATER Lab Sample ID: 10150\_\_

Level (low/med): LOW\_\_ Date Received: 05/04/91

% Solids: \_\_0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_\_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	34.1	B		P
7440-36-0	Antimony	33.0	U		P
7440-38-2	Arsenic	2.0	U		F
7440-39-3	Barium	6.9	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	3.0	U		P
7440-70-2	Calcium	263	B		P
7440-47-3	Chromium	9.0	U	*	P
7440-48-4	Cobalt	12.1	B		P
7440-50-8	Copper	2.1	B		P
7439-89-6	Iron	90.2	B	E	P
7439-92-1	Lead	2.0	B	W	F
7439-95-4	Magnesium	108	U		P
7439-96-5	Manganese	2.2	B		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	346	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	630	B		P
7440-28-0	Thallium	3.0	U		F
7440-62-2	Vanadium	6.2	B		P
7440-66-6	Zinc	3.0	U		P
	Cyanide	10.0	U		C

Color Before: CL\_\_ Clarity Before: C\_\_ Texture: \_\_\_\_\_

Color After: CL\_\_ Clarity After: C\_\_ Artifacts: \_\_\_\_\_

Comments:

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## U.S. EPA - CLP

4

## ICP INTERFERENCE CHECK SAMPLE

Lab Name: ECOLOGY\_AND\_ENVIRONMENT\_\_\_\_\_ Contract: \_\_\_\_\_  
 Lab Code: EANDE\_\_\_\_\_ Case No.: 9101.052 SAS No: \_\_\_\_\_ SDG No.: WFB06\_  
 ICP ID Number: JY\_\_\_\_\_ ICS Source: PERKIN-ELMER

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol. A	Sol. AB	Sol. A	Sol. AB	%R	Sol. A	Sol. AB	%R
Aluminum	499810	487706	467770	470690.0	96.5	454600	455620.0	93.4
Antimony	0	0	-196	-205.0		-244	-170.0	
Arsenic								
Barium	0	471	7	440.8	93.6	7	435.8	92.5
Beryllium	0	438	1	455.3	103.9	1	448.5	102.4
Cadmium	0	888	43	918.9	103.5	42	899.4	101.3
Calcium	499280	455779	477590	480360.0	105.4	471770	471240.0	103.4
Chromium	0	429	19	444.3	103.6	19	448.0	104.4
Cobalt	0	427	70	485.1	113.6	66	485.6	113.7
Copper	0	458	-28	416.4	90.9	-29	409.9	89.5
Iron	199980	179441	171380	172160.0	95.9	168750	168780.0	94.1
Lead								
Magnesium	500130	493483	481380	484940.0	98.3	478660	480220.0	97.3
Manganese	0	466	35	462.5	99.2	34	457.4	98.2
Mercury								
Nickel	0	827	30	839.8	101.5	38	844.7	102.1
Potassium	0		48			-192		
Selenium								
Silver	0	935	-6	889.9	95.2	-8	873.0	93.4
Sodium	0		391			96		
Thallium								
Vanadium	0	466	-30	430.5	92.4	-30	420.4	90.2
Zinc	0	915	40	940.7	102.8	35	919.3	100.5

FORM IV - IN

7/88

575

## U.S. EPA - CLP

6  
DUPLICATES

EPA SAMPLE NO.

W024 D

Lab Name: ECOLOGY\_AND\_ENVIRONMENT Contract: \_\_\_\_\_

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD	Q	M
Aluminum		2470.2000 U	2242.5000 U	9.7		P
Antimony		33.0000 U	33.0000 U			P
Arsenic		2.0000 U	2.0000 U			F
Barium		5.6750 B	7.1830 B	23.5		P
Beryllium		1.0000 U	1.0000 U			P
Cadmium		3.0000 U	3.0470 B	200.0		P
Calcium		752.7700 B	754.0800 B	0.2		P
Chromium	10.0	9.0000 U	19.5210	200.0	*	P
Cobalt		7.5620 B	7.2570 B	4.1		P
Copper		2.9950 B	2.0000 U	200.0		P
Iron		1424.1000	1337.4000	6.3		P
Lead	3.0	8.6500	7.1100	19.5		F
Magnesium		932.6600 B	934.9400 B	0.2		P
Manganese		13.2680 B	14.3110 B	7.6		P
Mercury						NR
Nickel		8.0000 U	12.9450 B	200.0		P
Potassium		263.0000 U	263.0000 U			P
Selenium		2.0000 U	2.0000 U			F
Silver		3.0000 U	3.0000 U			P
Sodium		3399.2000 B	3179.9000 B	6.7		P
Thallium		3.0000 U	3.0000 U			F
Vanadium		6.2480 B	9.2590 B	38.8		P
Zinc		13.8170 B	16.6230 B	18.4		P
Cyanide		10.0000 U	10.0000 U			AS



## U.S. EPA - CLP

6  
DUPLICATES

EPA SAMPLE NO.

WPB06 D

Lab Name: ECOLOGY\_AND\_ENVIRONMENT Contract: \_\_\_\_\_

Lab Code: EANDE Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD	Q	M
Aluminum						NR
Antimony						NR
Arsenic						NR
Barium						NR
Beryllium						NR
Cadmium						NR
Calcium						NR
Chromium						NR
Cobalt						NR
Copper						NR
Iron						NR
Lead						NR
Magnesium						NR
Manganese						NR
Mercury		0.2000 U	0.2000 U			CV
Nickel						NR
Potassium						NR
Selenium						NR
Silver						NR
Sodium						NR
Thallium						NR
Vanadium						NR
Zinc						NR
Cyanide						NR

## U.S. EPA - CLP

5A  
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: ECOLOGY AND ENVIRONMENT

Contract: \_\_\_\_\_

WPB06 S

Lab Code: EANDE

Case No.: 9101.052

SAS No.: \_\_\_\_\_

SDG No.: WFB06

Matrix: WATER

Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Aluminum							NR
Antimony							NR
Arsenic							NR
Barium							NR
Beryllium							NR
Cadmium							NR
Calcium							NR
Chromium							NR
Cobalt							NR
Copper							NR
Iron							NR
Lead							NR
Magnesium							NR
Manganese							NR
Mercury	75-125	1.0600	0.2000 U	1.00	106.0		CV
Nickel							NR
Potassium							NR
Selenium							NR
Silver							NR
Sodium							NR
Thallium							NR
Vanadium							NR
Zinc							NR
Cyanide	75-125	99.6000	10.0000 U	91.80	108.5		C

Comments:

## U.S. EPA - CLP

5A  
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: ECOLOGY\_AND\_ENVIRONMENT

Contract: \_\_\_\_\_

W024 S

Lab Code: EANDE

Case No.: 9101.052

SAS No.: \_\_\_\_\_

SDG No.: WFB06

Matrix: WATER

Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	4445.6000		2470.2000		2000.00	98.8		P
Antimony	75-125	461.1200		33.0000	U	500.00	92.2		P
Arsenic	75-125	30.8500		2.0000	U	40.00	77.1		F
Barium	75-125	2066.1000		5.6750	B	2000.00	103.0		P
Beryllium	75-125	53.4240		1.0000	U	50.00	106.8		P
Cadmium	75-125	54.6530		3.0000	U	50.00	109.3		P
Calcium									NR
Chromium	75-125	220.2300		9.0000	U	200.00	110.1		P
Cobalt	75-125	507.1400		7.5620	B	500.00	99.9		P
Copper	75-125	246.0600		2.9950	B	250.00	97.2		P
Iron	75-125	2655.4000		1424.1000		1000.00	123.1		P
Lead	75-125	27.4900		8.6500		20.00	94.2		F
Magnesium									NR
Manganese	75-125	519.8000		13.2680	B	500.00	101.3		P
Mercury									NR
Nickel	75-125	510.7800		8.0000	U	500.00	102.2		P
Potassium									NR
Selenium	75-125	7.6300		2.0000	U	10.00	76.3		F
Silver	75-125	46.8930		3.0000	U	50.00	93.8		P
Sodium									NR
Thallium	75-125	45.3400		3.0000	U	50.00	90.7		F
Vanadium	75-125	511.2200		6.2480	B	500.00	101.0		P
Zinc	75-125	510.9600		13.8170	B	500.00	99.4		P
Cyanide									NR

Comments:

## U.S. EPA - CLP

5A  
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

Lab Name: ECOLOGY\_AND\_ENVIRONMENT\_\_

Contract: \_\_\_\_\_

W025 S

Lab Code: EANDE\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_

Matrix: WATER\_\_\_\_\_

Level (low/med): LOW\_\_\_\_\_

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L\_

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NP
Chromium									N
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide	75-125	105.0000		10.0000	U	106.7 91.80	114.4 98.4		AS

Comments:

## U.S. EPA - CLP

3  
BLANKS

Lab Name: ECOLOGY\_AND\_ENVIRONMENT

Contract: \_\_\_\_\_

Lab Code: EANDE

Case No.: 9101.052

SAS No.: \_\_\_\_\_

SDG No.: WFB06

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum	14.0	U	14.0	U	14.0	U	14.0	U	14.0	U	P
Antimony	33.0	U	33.0	U	33.0	U	33.0	U	33.0	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Barium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	P
Cadmium	3.1	B	4.6	B	3.0	U	3.0	U	3.0	U	P
Calcium	95.0	U	95.0	U	95.0	U	95.0	U	95.0	U	P
Chromium	9.0	U	9.0	U	9.0	U	9.0	U	9.0	U	P
Cobalt	5.0	U	5.0	U	6.2	B	7.8	B	6.3	B	P
Copper	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	P
Iron	13.6	B	17.4	B	5.0	U	5.0	U	23.2	B	P
Lead	-1.2	B	-1.0	B	1.0	U	-1.3	B	1.0	U	F
Magnesium	108.0	U	108.0	U	108.0	U	108.0	U	108.0	U	P
Manganese	1.0	U	1.0	U	1.6	B	1.0	U	1.0	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U			CV
Nickel	-10.2	B	8.0	U	8.0	U	8.0	U	8.0	U	P
Potassium	263.0	U	263.0	U	263.0	U	263.0	U	263.0	U	P
Selenium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Silver	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	P
Sodium	74.0	U	220.8	B	74.0	U	74.0	U	74.0	U	P
Thallium	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	F
Vanadium	4.0	U	4.0	U	4.0	U	6.9	B	4.0	U	P
Zinc	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	P
Cyanide	10.0	U	10.0	U	10.0	U			10.0	U	AS

## U.S. EPA - CLP

3  
BLANKS

Lab Name: ECOLOGY AND ENVIRONMENT

Contract: \_\_\_\_\_

Lab Code: EANDE

Case No.: 9101.052

SAS No.: \_\_\_\_\_

SDG No.: WFB06

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum			14.0	U	14.0	U					P
Antimony			33.0	U	33.0	U					P
Arsenic			2.0	U	2.0	U					F
Barium			5.0	U	5.0	U					P
Beryllium			1.0	U	1.0	U					P
Cadmium			3.0	U	3.0	U					P
Calcium			95.0	U	95.0	U					P
Chromium			9.0	U	9.0	U					P
Cobalt			5.0	U	5.0	U					P
Copper			2.0	U	2.0	U					P
Iron			5.0	U	11.5	B					P
Lead			1.0	U	1.0	U	1.0	U			F
Magnesium			108.0	U	108.0	U					P
Manganese			1.0	U	1.0	U					P
Mercury											NR
Nickel			8.0	U	8.0	U					P
Potassium			263.0	U	263.0	U					P
Selenium			2.0	U	2.0	U					F
Silver			3.0	U	3.0	U					P
Sodium			74.0	U	74.0	U					P
Thallium			3.0	U	3.0	U					F
Vanadium			4.0	U	4.0	U					P
Zinc			3.0	U	3.0	U					P
Cyanide	10.0	U							10.0	U	C

## U.S. EPA - CLP

3  
BLANKS

Lab Name: ECOLOGY\_AND\_ENVIRONMENT\_\_\_\_\_ Contract: \_\_\_\_\_

Lab Code: EANDE\_\_\_\_\_ Case No.: 9101.052 SAS No.: \_\_\_\_\_ SDG No.: WFB06\_\_\_\_\_

Preparation Blank Matrix (soil/water): \_\_\_\_\_

Preparation Blank Concentration Units (ug/L or mg/kg): \_\_\_\_\_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead			1.0	U	1.0	U	1.0	U			F
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

JOB NUMBER :9101.052

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-10143 MATRIX: WATER  
SAMPLE ID CLIENT: P03-W021

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Total Alkalinity	25	-	1.0	MG/L CAC03
Total Hardness	47	-	1.0	MG/L CAC03
Petroleum Hydrocarbons	ND	-	1.0	MG/L
TOC	32	-	1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE



JOB NUMBER :9101.052

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-10144 MATRIX: WATER  
SAMPLE ID CLIENT: P03-W023

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Total Alkalinity	1.0	-	1.0	MG/L CAC03
Total Hardness	20		1.0	MG/L CAC03
Petroleum Hydrocarbons	ND		1.0	MG/L
TOC	6.7		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.052

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-10145 MATRIX: WATER  
SAMPLE ID CLIENT: P03-W024

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Total Alkalinity	ND		1.0	MG/L CAC03
Total Hardness	6.0		1.0	MG/L CAC03
Petroleum Hydrocarbons	ND		1.0	MG/L
TOC	1.1		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-10146 MATRIX: WATER  
SAMPLE ID CLIENT: P03-W025

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Total Alkalinity	4.5		1.0	MG/L CAC03
Total Hardness	2.0		1.0	MG/L CAC03
Petroleum Hydrocarbons	ND		1.0	MG/L
TOC	3.6		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.052

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-10147 MATRIX: WATER  
SAMPLE ID CLIENT: P03-W025D

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Total Alkalinity	4.5		1.0	MG/L CAC03
Total Hardness	8.0		1.0	MG/L CAC03
Petroleum Hydrocarbons	ND		1.0	MG/L
TOC	3.3		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-10148 MATRIX: WATER  
SAMPLE ID CLIENT: P03-WFB06

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Total Alkalinity	1.5		1.0	MG/L CAC03
Total Hardness	2.0		1.0	MG/L CAC03
Petroleum Hydrocarbons	ND		1.0	MG/L
TOC	ND		1.0	MG/L

-----

QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.052

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-10149 MATRIX: WATER  
SAMPLE ID CLIENT: P03-WRB06

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Total Hardness	3.0		1.0	MG/L CAC03
Petroleum Hydrocarbons	ND		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

JOB NUMBER :9101.052

Ecology and Environment, Inc.  
Analytical Services Center

CLIENT : UH-8000 NASP - PHASE I BATCH 2  
SAMPLE ID LAB :EE-91-10150 MATRIX: WATER  
SAMPLE ID CLIENT: P03-WPB06

PARAMETER	RESULTS	Q	QNT. LIMIT	UNITS
Total Hardness	ND		1.0	MG/L CAC03
Petroleum Hydrocarbons	ND		1.0	MG/L

-----  
QUALIFIERS: C = COMMENT ND = NOT DETECTED  
J = ESTIMATED VALUE B = ALSO PRESENT IN BLANK  
L = PRESENT BELOW STATED DETECTION LIMIT  
NA = NOT APPLICABLE

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W021

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10143

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9946

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/14/91

Column: (pack/cap) CAP

Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	-----Chloromethane	100	U
74-83-9	-----Bromomethane	100	U
75-01-4	-----Vinyl Chloride	100	U
75-00-3	-----Chloroethane	100	U
75-09-2	-----Methylene Chloride	43	J
67-64-1	-----Acetone	100	U
75-15-0	-----Carbon Disulfide	74	
75-35-4	-----1,1-Dichloroethene	50	U
75-34-3	-----1,1-Dichloroethane	50	U
540-59-0	-----1,2-Dichloroethene (total)	50	U
67-66-3	-----Chloroform	50	U
107-06-2	-----1,2-Dichloroethane	50	U
78-93-3	-----2-Butanone	100	U
71-55-6	-----1,1,1-Trichloroethane	50	U
56-23-5	-----Carbon Tetrachloride	50	U
108-05-4	-----Vinyl Acetate	100	U
75-27-4	-----Bromodichloromethane	50	U
78-87-5	-----1,2-Dichloropropane	50	U
10061-01-5	-----cis-1,3-Dichloropropene	50	U
79-01-6	-----Trichloroethene	50	U
124-48-1	-----Dibromochloromethane	50	U
79-00-5	-----1,1,2-Trichloroethane	50	U
71-43-2	-----Benzene	200	
10061-02-6	-----trans-1,3-Dichloropropene	50	U
75-25-2	-----Bromoform	50	U
108-10-1	-----4-Methyl-2-Pentanone	100	U
591-78-6	-----2-Hexanone	100	U
127-18-4	-----Tetrachloroethene	50	U
79-34-5	-----1,1,2,2-Tetrachloroethane	50	U
108-88-3	-----Toluene	50	U
108-90-7	-----Chlorobenzene	50	U
100-41-4	-----Ethylbenzene	83	
100-42-5	-----Styrene	50	U
1330-20-7	-----Xylene (total)	790	



1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W021

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052 SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10143

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9946

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/14/91

Column (pack/cap) CAP

Dilution Factor: 10

Number TICs found: 4

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	16.05	60	J
2.	Alkylated Benzene Isomer	22.23	200	J
3.	Alkylated Benzene Isomer	23.28	210	J
4.	Alkylated Benzene Isomer	24.24	92	J

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W023

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052 SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10144

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2447

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	-----Chloromethane	10	U
74-83-9	-----Bromomethane	10	U
75-01-4	-----Vinyl Chloride	10	U
75-00-3	-----Chloroethane	10	U
75-09-2	-----Methylene Chloride	5	
67-64-1	-----Acetone	12	
75-15-0	-----Carbon Disulfide	9	
75-35-4	-----1,1-Dichloroethene	5	U
75-34-3	-----1,1-Dichloroethane	5	U
540-59-0	-----1,2-Dichloroethene (total)	5	U
67-66-3	-----Chloroform	5	U
107-06-2	-----1,2-Dichloroethane	5	U
78-93-3	-----2-Butanone	10	U
71-55-6	-----1,1,1-Trichloroethane	5	U
56-23-5	-----Carbon Tetrachloride	5	U
108-05-4	-----Vinyl Acetate	10	U
75-27-4	-----Bromodichloromethane	5	U
78-87-5	-----1,2-Dichloropropane	5	U
10061-01-5	-----cis-1,3-Dichloropropene	5	U
79-01-6	-----Trichloroethene	5	U
124-48-1	-----Dibromochloromethane	5	U
79-00-5	-----1,1,2-Trichloroethane	5	U
71-43-2	-----Benzene	5	U
10061-02-6	-----trans-1,3-Dichloropropene	5	U
75-25-2	-----Bromoform	5	U
108-10-1	-----4-Methyl-2-Pentanone	10	U
591-78-6	-----2-Hexanone	10	U
127-18-4	-----Tetrachloroethene	5	U
79-34-5	-----1,1,2,2-Tetrachloroethane	5	U
108-88-3	-----Toluene	5	U
108-90-7	-----Chlorobenzene	5	U
100-41-4	-----Ethylbenzene	2	J
100-42-5	-----Styrene	5	U
1330-20-7	-----Xylene (total)	2	J

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W023

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052 SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10144

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2447

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 3

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	24.36	18	J
2.	UNKNOWN	25.43	6.0	J
3.	UNKNOWN	28.39	8.0	J

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W024

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10145

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: 02448

Level: (low/med) LDW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	4	100
67-64-1	Acetone	3	100
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
108-05-4	Vinyl Acetate	10	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	5	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	5	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	1	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	7	10

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W024

Lab Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10145

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2448

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 1

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	24.32	8.01J	

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W025

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10146

Sample wt/Vol: 5.0 (g/mL) ML

Lab File ID: D2449

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
74-87-3	Chloromethane	10	10	
74-83-9	Bromomethane	10	10	
75-01-4	Vinyl Chloride	10	10	
75-00-3	Chloroethane	10	10	
75-09-2	Methylene Chloride	4	183	
67-64-1	Acetone	17	18	
75-15-0	Carbon Disulfide	17		
75-35-4	1,1-Dichloroethene	5	10	
75-34-3	1,1-Dichloroethane	5	10	
540-59-0	1,2-Dichloroethene (total)	5	10	
67-66-3	Chloroform	5	10	
107-06-2	1,2-Dichloroethane	5	10	
78-93-3	2-Butanone	10	10	
71-55-6	1,1,1-Trichloroethane	5	10	
56-23-5	Carbon Tetrachloride	5	10	
108-05-4	Vinyl Acetate	10	10	
75-27-4	Bromodichloromethane	5	10	
78-87-5	1,2-Dichloropropane	5	10	
10061-01-5	cis-1,3-Dichloropropene	5	10	
79-01-6	Trichloroethene	5	10	
124-48-1	Dibromochloromethane	5	10	
79-00-5	1,1,2-Trichloroethane	5	10	
71-43-2	Benzene	5	10	
10061-02-6	trans-1,3-Dichloropropene	5	10	
75-25-2	Bromoform	5	10	
108-10-1	4-Methyl-2-Pentanone	10	10	
591-78-6	2-Hexanone	10	10	
127-18-4	Tetrachloroethene	5	10	
79-34-5	1,1,2,2-Tetrachloroethane	5	10	
108-88-3	Toluene	5	10	
108-90-7	Chlorobenzene	5	10	
100-41-4	Ethylbenzene	2	13	
100-42-5	Styrene	5	10	
1330-20-7	Xylene (total)	10		

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W025

Lab Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10146

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2449

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 5

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkylated Benzene Isomer	21.69	10	13
2.	Alkylated Benzene Isomer	23.56	8.0	13
3.	UNKNOWN	24.34	14	13
4.	UNKNOWN	25.43	6.0	13
5.	UNKNOWN	28.42	8.0	13

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W0250

Lab Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10147

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9945

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/14/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	2	10
67-64-1	Acetone	13	18
75-16-0	Carbon Disulfide	19	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
108-05-4	Vinyl Acetate	10	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	5	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	5	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	2	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	12	10
		11	

45 6/14/91



1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W025D

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10147

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9945

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/14/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 8

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkylated Benzene Isomer	23.25	40	13
2.	Alkylated Benzene Isomer	24.78	13	13
3.	Alkylated Benzene Isomer	25.44	9.0	13
4.	Alkylated Benzene Isomer	25.62	8.0	13
5.	UNKNOWN	26.25	5.0	13
6.	Alkylated Benzene Isomer	26.37	6.0	13
7.	Dihydro Methyl 1H-Indene Iso	27.27	6.0	13
8.	UNKNOWN PAH	27.63	10	13

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WTB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10151

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9948

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/14/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

74-87-3	Chloromethane	10	IU
74-83-9	Bromomethane	10	IU
75-01-4	Vinyl Chloride	10	IU
75-00-3	Chloroethane	10	IU
75-09-2	Methylene Chloride	28	I
67-64-1	Acetone	21	IB
75-15-0	Carbon Disulfide	23	I
75-35-4	1,1-Dichloroethene	5	IU
75-34-3	1,1-Dichloroethane	5	IU
540-59-0	1,2-Dichloroethene (total)	5	IU
67-66-3	Chloroform	5	IU
107-06-2	1,2-Dichloroethane	5	IU
78-93-3	2-Butanone	10	IU
71-55-6	1,1,1-Trichloroethane	5	IU
56-23-5	Carbon Tetrachloride	5	IU
108-05-4	Vinyl Acetate	10	IU
75-27-4	Bromodichloromethane	5	IU
78-87-5	1,2-Dichloropropane	5	IU
10061-01-5	cis-1,3-Dichloropropene	5	IU
79-01-6	Trichloroethene	5	IU
124-48-1	Dibromochloromethane	5	IU
79-00-5	1,1,2-Trichloroethane	5	IU
71-43-2	Benzene	5	IU
10061-02-6	trans-1,3-Dichloropropene	5	IU
75-25-2	Bromoform	5	IU
108-10-1	4-Methyl-2-Pentanone	10	IU
591-78-6	2-Hexanone	10	IU
127-18-4	Tetrachloroethene	5	IU
79-34-5	1,1,2,2-Tetrachloroethane	5	IU
108-88-3	Toluene	5	IU
108-90-7	Chlorobenzene	5	IU
100-41-4	Ethylbenzene	5	IU
100-42-5	Styrene	5	IU
1330-20-7	Xylene (total)	5	IU

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WTB06

Lab Name: E & E INC.

Contract:

Lab Code: EAND

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10151

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9948

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/14/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 2

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	21.20	16	J
2.	UNKNOWN	25.16	13	J

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WFB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDL

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10148

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9947

Level: (low/med) LDW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/14/91

Column: (pack/cap) CAP

Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	100	10
74-83-9	Bromomethane	100	10
75-01-4	Vinyl Chloride	100	10
75-00-3	Chloroethane	100	10
75-09-2	Methylene Chloride	21000	1E
67-64-1	Acetone	130	18
75-15-0	Carbon Disulfide	50	10
75-35-4	1,1-Dichloroethene	50	10
75-34-3	1,1-Dichloroethane	50	10
540-59-0	1,2-Dichloroethene (total)	50	10
67-66-3	Chloroform	50	10
107-06-2	1,2-Dichloroethane	50	10
78-93-3	2-Butanone	100	10
71-55-6	1,1,1-Trichloroethane	50	10
56-23-5	Carbon Tetrachloride	50	10
108-05-4	Vinyl Acetate	100	10
75-27-4	Bromodichloromethane	50	10
78-87-5	1,2-Dichloropropane	50	10
10061-01-5	cis-1,3-Dichloropropene	50	10
79-01-6	Trichloroethene	50	10
124-48-1	Dibromochloromethane	50	10
79-00-5	1,1,2-Trichloroethane	50	10
71-43-2	Benzene	50	10
10061-02-6	trans-1,3-Dichloropropene	50	10
75-25-2	Bromoform	50	10
108-10-1	4-Methyl-2-Pentanone	100	10
591-78-6	2-Hexanone	100	10
127-18-4	Tetrachloroethene	50	10
79-34-5	1,1,2,2-Tetrachloroethane	50	10
108-88-3	Toluene	50	10
108-90-7	Chlorobenzene	50	10
100-41-4	Ethylbenzene	50	10
100-42-5	Styrene	50	10
1330-20-7	Xylene (total)	50	10

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WFB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10148

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9947

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/14/91

Column (pack/cap) CAP

Dilution Factor: 10

Number TICs found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
_____	_____	_____	_____	_____

## VOLATILE ORGANICS ANALYSIS DATA SHEET

WFB06DL

Lab Name: E &amp; E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10148DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2534

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/16/91

Column: (pack/cap) CAP

Dilution Factor: 100

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

74-87-3-----	Chloromethane	1000	U
74-83-9-----	Bromomethane	1000	U
75-01-4-----	Vinyl Chloride	1000	U
75-00-3-----	Chloroethane	1000	U
75-09-2-----	Methylene Chloride	19000	BD
67-64-1-----	Acetone	440	BDJ
75-15-0-----	Carbon Disulfide	500	U
75-35-4-----	1,1-Dichloroethene	500	U
75-34-3-----	1,1-Dichloroethane	500	U
540-59-0-----	1,2-Dichloroethene (total)	500	U
67-66-3-----	Chloroform	500	U
107-06-2-----	1,2-Dichloroethane	500	U
78-93-3-----	2-Butanone	1000	U
71-55-6-----	1,1,1-Trichloroethane	500	U
56-23-5-----	Carbon Tetrachloride	500	U
108-05-4-----	Vinyl Acetate	1000	U
75-27-4-----	Bromodichloromethane	500	U
78-87-5-----	1,2-Dichloropropane	500	U
10061-01-5-----	cis-1,3-Dichloropropene	500	U
79-01-6-----	Trichloroethene	500	U
124-48-1-----	Dibromochloromethane	500	U
79-00-5-----	1,1,2-Trichloroethane	500	U
71-43-2-----	Benzene	500	U
10061-02-6-----	trans-1,3-Dichloropropene	500	U
75-25-2-----	Bromoform	500	U
108-10-1-----	4-Methyl-2-Pentanone	1000	U
591-78-6-----	2-Hexanone	1000	U
127-18-4-----	Tetrachloroethene	500	U
79-34-5-----	1,1,2,2-Tetrachloroethane	500	U
108-88-3-----	Toluene	500	U
108-90-7-----	Chlorobenzene	500	U
100-41-4-----	Ethylbenzene	500	U
100-42-5-----	Styrene	500	U
1330-20-7-----	Xylene (total)	500	U

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

WFB06DL

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10148DL

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2534

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/16/91

Column (pack/cap) CAP

Dilution Factor: 100

Number TICs found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WRB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10149

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2453

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/L

Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	15	B
67-64-1	Acetone	12	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U



1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WRB06

b Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10149

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2453

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 3

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	24.35	16.13	
2.	UNKNOWN	25.43	7.013	
3.	UNKNOWN	28.40	7.013	

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WPB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10150

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2454

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	25	18
67-64-1	Acetone	19	18
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
108-05-4	Vinyl Acetate	10	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	5	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	5	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	5	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	5	10

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WPB06

Lab Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10150

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: 02454

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

Date Analyzed: 05/13/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 3

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	24.34	12.13	
2.	UNKNOWN	25.44	7.013	
3.	UNKNOWN	28.40	7.013	

4A  
VOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Lab File ID: D2439

Lab Sample ID: UBLKW1

Date Analyzed: 05/13/91

Time Analyzed: 0536

Matrix: (soil/water) WATER

Level: (low/med) LOW

Instrument ID: 7001D

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01 W024	10145	D2448	1125
02 W025	10146	D2449	1202
03 WPB06	10150	D2454	1507
04 WRB06	10149	D2453	1430

COMMENTS:

4A  
VOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052 SAS No.:

SDG No.:

Lab File ID: D2439

Lab Sample ID: VBLKW1

Date Analyzed: 05/13/91

Time Analyzed: 0536

Matrix: (soil/water) WATER

Level: (low/med) LOW

Instrument ID: 7001D

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	W023	10144	D2447	1048
02	W024	10145	D2448	1125
03	W025	10146	D2449	1202
04	WPB06	10150	D2454	1507
05	WRB06	10149	D2453	1430

COMMENTS:

## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: E &amp; E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: WTB06

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0	47.8	96	161-145
Trichloroethene	50.0	0	52.1	104	171-120
Benzene	50.0	0	53.9	108	176-127
Toluene	50.0	0	52.2	104	176-125
Chlorobenzene	50.0	0	53.0	106	175-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD   REC.
1,1-Dichloroethene	50.0	48.5	97	-1	14   161-145
Trichloroethene	50.0	52.4	105	-1	14   171-120
Benzene	50.0	52.1	104	4	11   176-127
Toluene	50.0	51.2	102	2	13   176-125
Chlorobenzene	50.0	52.6	105	1	13   175-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UCLKW1

o Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: UCLKW1

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2439

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/13/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
74-87-3	Chloromethane	10	10	
74-83-9	Bromomethane	10	10	
75-01-4	Vinyl Chloride	10	10	
75-00-3	Chloroethane	10	10	
75-09-2	Methylene Chloride	8		
67-64-1	Acetone	5	10	
75-15-0	Carbon Disulfide	5	10	
75-35-4	1,1-Dichloroethene	5	10	
75-34-3	1,1-Dichloroethane	5	10	
540-59-0	1,2-Dichloroethene (total)	5	10	
67-66-3	Chloroform	5	10	
107-06-2	1,2-Dichloroethane	5	10	
78-93-3	2-Butanone	10	10	
71-55-6	1,1,1-Trichloroethane	5	10	
56-23-5	Carbon Tetrachloride	5	10	
108-05-4	Vinyl Acetate	10	10	
75-27-4	Bromodichloromethane	5	10	
78-87-5	1,2-Dichloropropane	5	10	
10061-01-5	cis-1,3-Dichloropropene	5	10	
79-01-6	Trichloroethene	5	10	
124-48-1	Dibromochloromethane	5	10	
79-00-5	1,1,2-Trichloroethane	5	10	
71-43-2	Benzene	5	10	
10061-02-6	trans-1,3-Dichloropropene	5	10	
75-25-2	Bromoform	5	10	
108-10-1	4-Methyl-2-Pentanone	10	10	
591-78-6	2-Hexanone	10	10	
127-18-4	Tetrachloroethene	5	10	
79-34-5	1,1,2,2-Tetrachloroethane	5	10	
108-88-3	Toluene	5	10	
108-90-7	Chlorobenzene	5	10	
100-41-4	Ethylbenzene	5	10	
100-42-5	Styrene	5	10	
1330-20-7	Xylene (total)	5	10	

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UCLKW1

Lab Name: E & E INC.

Contract:

Lab Code: EAND

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: UCLKW1

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2439

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/13/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
_____	_____	_____	_____	_____



4A  
VOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Lab File ID: F9944

Lab Sample ID: VBLKW2

Date Analyzed: 05/14/91

Time Analyzed: 1651

Matrix: (soil/water) WATER

Level: (low/med) LOW

Instrument ID: 7001F

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA	LAB	LAB	TIME
SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
=====	=====	=====	=====
01 W021	10143	F9946	1821
02 W025D	10147	F9945	1744
03 WFB06	10148	F9947	1858
04 WTB06	10151	F9948	1936
05 WTB06MS	10151MS	F9949	2013
06 WTB06MSD	10151MSD	F9950	2050

REMARKS:

4A  
VOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC. Contract: -

Lab Code: EAND5 Case No.: 9101\_052 SAS No.: SDG No.:

Lab File ID: F9944 Lab Sample ID: UBLKW2

Date Analyzed: 05/14/91 Time Analyzed: 1651

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 7001F

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA	LAB	LAB	TIME
SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
=====	=====	=====	=====
01 W021	10143	F9946	1821
02 W025D	10147	F9945	1744
03 WFB06	10148	F9947	1858
04 WTB06	10151	F9948	1936
05 WTB06MS	10151MS	F9949	2013
06 WTB06MSD	10151MSD	F9950	2050

COMMENTS:

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UCLKW2

S Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: UCLKW2

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: F9944

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/14/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	5	10
67-64-1	Acetone	17	
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
108-05-4	Vinyl Acetate	10	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	5	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	5	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	5	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	5	10

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UCLKW2

Lab Name: E & E INC.

Contract:

Lab Code: EANDC

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: UCLKW2

Sample wt/Vol: 5.0 (g/mL) ML

Lab File ID: F9944

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/14/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
_____	_____	_____	_____	_____

4A  
VOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Lab File ID: D2533

Lab Sample ID: UBLKW3

Date Analyzed: 05/16/91

Time Analyzed: 1209

Matrix: (soil/water) WATER

Level: (low/med) LOW

Instrument ID: 7001D

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA	LAB	LAB	TIME
SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
=====	=====	=====	=====
01 WFB06 <del>DL</del>	10148 DL	D2534	1256

COMMENTS:

6/17/91 bms

4A  
VOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052

SAS No.:

SOG No.:

Lab File ID: D2533

Lab Sample ID: UBLKW3

Date Analyzed: 05/16/91

Time Analyzed: 1209

Matrix: (soil/water) WATER

Level: (low/med) LOW

Instrument ID: 7001D

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01 WFB06 <del>DL</del>	10148 DL	D2534	1256

COMMENTS:

6/17/91 bms

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UCLKW3

Company Name: E & E INC.

Contract:

Lab Code: EANDL

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: UCLKW3

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: 02509

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/15/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	7	
67-64-1	Acetone	19	
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
108-05-4	Vinyl Acetate	10	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	5	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	5	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	5	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	5	10

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UCLKW3

Lab Name: E & E INC.

Contract:

Lab Code: EANDF

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: UCLKW3

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2509

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/15/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
-----	-----	-----	-----	-----
_____	_____	_____	_____	_____



4A  
VOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC.

Contract:

Lab Code: EANDC

Case No.: 9101\_052

SAS No.:

SDG No.:

Lab File ID: D2533

Lab Sample ID: VBLKW4

Date Analyzed: 05/16/91

Time Analyzed: 1209

Matrix: (soil/water) WATER

Level: (low/med) LOW

Instrument ID: 7001D

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01 WFB06	10148	D2534	1256
02 WTB06	10151	D2535	1332
03 WTB06MS	10151MS	D2536	1408
04 WTB06MSD	10151MSD	D2537	1445

COMMENTS:

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UCLKW4

Lab Name: E & E INC.

Contract:

Lab Code: EANDL

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: UCLKW4

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2533

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/16/91

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

74-87-3	Chloromethane	10	10
74-83-9	Bromomethane	10	10
75-01-4	Vinyl Chloride	10	10
75-00-3	Chloroethane	10	10
75-09-2	Methylene Chloride	7	
67-64-1	Acetone	10	
75-15-0	Carbon Disulfide	5	10
75-35-4	1,1-Dichloroethene	5	10
75-34-3	1,1-Dichloroethane	5	10
540-59-0	1,2-Dichloroethene (total)	5	10
67-66-3	Chloroform	5	10
107-06-2	1,2-Dichloroethane	5	10
78-93-3	2-Butanone	10	10
71-55-6	1,1,1-Trichloroethane	5	10
56-23-5	Carbon Tetrachloride	5	10
108-05-4	Vinyl Acetate	10	10
75-27-4	Bromodichloromethane	5	10
78-87-5	1,2-Dichloropropane	5	10
10061-01-5	cis-1,3-Dichloropropene	5	10
79-01-6	Trichloroethene	5	10
124-48-1	Dibromochloromethane	5	10
79-00-5	1,1,2-Trichloroethane	5	10
71-43-2	Benzene	5	10
10061-02-6	trans-1,3-Dichloropropene	5	10
75-25-2	Bromoform	5	10
108-10-1	4-Methyl-2-Pentanone	10	10
591-78-6	2-Hexanone	10	10
127-18-4	Tetrachloroethene	5	10
79-34-5	1,1,2,2-Tetrachloroethane	5	10
108-88-3	Toluene	5	10
108-90-7	Chlorobenzene	5	10
100-41-4	Ethylbenzene	5	10
100-42-5	Styrene	5	10
1330-20-7	Xylene (total)	5	10

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UBLKW4

Client Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: UBLKW4

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: D2533

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/16/91

Column (pack/cap) CAP

Dilution Factor: 1.0

Number TICs Found: 0

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
_____	_____	_____	_____	_____

18  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W021

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10143

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3714

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc)

SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	10
111-44-4	bis(2-Chloroethyl)Ether	10	10
95-57-8	2-Chlorophenol	10	10
541-73-1	1,3-Dichlorobenzene	10	10
106-46-7	1,4-Dichlorobenzene	10	10
100-51-6	Benzyl Alcohol	10	10
95-50-1	1,2-Dichlorobenzene	10	10
95-48-7	2-Methylphenol	10	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10	10
106-44-5	4-Methylphenol	10	10
621-64-7	N-Nitroso-Di-n-Propylamine	10	10
67-72-1	Hexachloroethane	10	10
98-95-3	Nitrobenzene	10	10
78-59-1	Isophorone	10	10
98-75-5	2-Nitrophenol	10	10
105-67-9	2,4-Dimethylphenol	6	10
65-85-0	Benzoic Acid	50	10
111-91-1	bis(2-Chloroethoxy)Methane	10	10
120-83-2	2,4-Dichlorophenol	10	10
120-82-1	1,2,4-Trichlorobenzene	10	10
91-20-3	Naphthalene	35	10
106-47-8	4-Chloroaniline	10	10
87-68-3	Hexachlorobutadiene	10	10
59-50-7	4-Chloro-3-Methylphenol	10	10
91-57-6	2-Methylnaphthalene	7	10
77-47-4	Hexachlorocyclopentadiene	10	10
98-06-2	2,4,6-Trichlorophenol	10	10
95-95-4	2,4,5-Trichlorophenol	50	10
91-58-7	2-Chloronaphthalene	10	10
88-74-4	2-Nitroaniline	50	10
131-11-3	Dimethyl Phthalate	10	10
208-96-8	Acenaphthylene	10	10
606-20-2	2,6-Dinitrotoluene	10	10

1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W021

Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10143

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3714

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	10
83-32-9	Acenaphthene	10	10
51-28-5	2,4-Dinitrophenol	50	10
100-02-7	4-Nitrophenol	50	10
132-64-9	Dibenzofuran	10	10
121-14-2	2,4-Dinitrotoluene	10	10
84-66-2	Diethylphthalate	10	10
7005-72-3	4-Chlorophenyl-phenylether	10	10
86-73-7	Fluorene	10	10
100-10-6	4-Nitroaniline	50	10
534-52-1	4,6-Dinitro-2-Methylphenol	50	10
86-30-6	N-Nitrosodiphenylamine (1)	10	10
101-55-3	4-Bromophenyl-phenylether	10	10
118-74-1	Hexachlorobenzene	10	10
87-86-5	Pentachlorophenol	50	10
85-01-8	Phenanthrene	10	10
120-12-7	Anthracene	10	10
84-74-2	Di-n-Butylphthalate	1	13
206-44-0	Fluoranthene	10	10
129-00-0	Pyrene	10	10
85-68-7	Butylbenzylphthalate	10	10
91-94-1	3,3'-Dichlorobenzidine	20	10
56-55-3	Benzo(a)Anthracene	10	10
218-01-9	Chrysene	10	10
117-81-7	bis(2-Ethylhexyl)Phthalate	7	10
117-84-0	Di-n-Octyl Phthalate	10	10
205-99-2	Benzo(b)Fluoranthene	10	10
207-08-9	Benzo(k)Fluoranthene	10	10
50-32-8	Benzo(a)Pyrene	10	10
193-39-5	Indeno(1,2,3-cd)Pyrene	10	10
53-70-3	Dibenz(a,h)Anthracene	10	10
191-24-2	Benzo(g,h,i)Perylene	10	10

(1) - Cannot be separated from Diphenylamine

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W021

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10143

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3714

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

Number TICs found: 20

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Dimethyl Benzene Isomer	6.06	140	13
2.	Ethyl Methyl Benzene Isomer	8.54	42	13
3.	Trimethyl Benzene Isomer	8.72	30	13
4.	Trimethyl Benzene Isomer	9.98	37	13
5.	Ethyl Dimethyl Benzene Isome	11.29	22	13
6.	UNKNOWN	12.67	30	13
7.	UNKNOWN	13.64	22	13
8.	UNKNOWN	14.28	22	13
9.	UNKNOWN	16.94	20	13
10.	UNKNOWN	18.37	19	13
11.	UNKNOWN	18.50	35	13
12.	UNKNOWN	19.01	11	13
13.	UNKNOWN	19.56	16	13
14.	UNKNOWN	20.19	14	13
15.	UNKNOWN	20.75	23	13
16.	UNKNOWN	21.81	11	13
17.	UNKNOWN HYDROCARBON	23.46	9.0	13
18.	UNKNOWN HYDROCARBON	24.79	10	13
19. 10544500	Molecular Sulfur	26.43	150	13
20.	UNKNOWN	26.84	14	183

18  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W023

b Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10144

Sample wt/Vol: 1000 (g/mL) ML

Lab File ID: G3715

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	10
111-44-4	bis(2-Chloroethyl)Ether	10	10
95-57-8	2-Chlorophenol	10	10
541-73-1	1,3-Dichlorobenzene	10	10
106-46-7	1,4-Dichlorobenzene	10	10
100-51-6	Benzyl Alcohol	10	10
95-50-1	1,2-Dichlorobenzene	10	10
95-48-7	2-Methylphenol	10	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10	10
106-44-5	4-Methylphenol	10	10
621-64-7	N-Nitroso-Di-n-Propylamine	10	10
67-72-1	Hexachloroethane	10	10
98-95-3	Nitrobenzene	10	10
78-59-1	Isophorone	10	10
88-75-5	2-Nitrophenol	10	10
105-67-9	2,4-Dimethylphenol	10	10
65-85-0	Benzoic Acid	50	10
111-91-1	bis(2-Chloroethoxy)Methane	10	10
120-83-2	2,4-Dichlorophenol	10	10
120-82-1	1,2,4-Trichlorobenzene	10	10
91-20-3	Naphthalene	10	10
106-47-8	4-Chloroaniline	10	10
87-68-3	Hexachlorobutadiene	10	10
59-50-7	4-Chloro-3-Methylphenol	10	10
91-57-6	2-Methylnaphthalene	10	10
77-47-4	Hexachlorocyclopentadiene	10	10
88-06-2	2,4,6-Trichlorophenol	10	10
95-95-4	2,4,5-Trichlorophenol	50	10
91-58-7	2-Chloronaphthalene	10	10
88-74-4	2-Nitroaniline	50	10
131-11-3	Dimethyl Phthalate	10	10
208-96-8	Acenaphthylene	10	10
606-20-2	2,6-Dinitrotoluene	10	10

1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W023

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10144

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3715

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

99-09-2-----	3-Nitroaniline	50	IU
83-32-9-----	Acenaphthene	10	IU
51-28-5-----	2,4-Dinitrophenol	50	IU
100-02-7-----	4-Nitrophenol	50	IU
132-64-9-----	Dibenzofuran	10	IU
121-14-2-----	2,4-Dinitrotoluene	10	IU
84-66-2-----	Diethylphthalate	10	IU
2005-72-3-----	4-Chlorophenyl-phenylether	10	IU
86-73-7-----	Fluorene	10	IU
100-10-6-----	4-Nitroaniline	50	IU
534-52-1-----	4,6-Dinitro-2-Methylphenol	50	IU
86-30-6-----	N-Nitrosodiphenylamine (1)	10	IU
101-55-3-----	4-Bromophenyl-phenylether	10	IU
118-74-1-----	Hexachlorobenzene	10	IU
87-86-5-----	Pentachlorophenol	50	IU
85-01-8-----	Phenanthrene	10	IU
120-12-7-----	Anthracene	10	IU
84-74-2-----	Di-n-Butylphthalate	1	IJ
206-44-0-----	Fluoranthene	10	IU
129-00-0-----	Pyrene	10	IU
85-68-7-----	Butylbenzylphthalate	10	IU
91-94-1-----	3,3'-Dichlorobenzidine	20	IU
56-55-3-----	Benzo(a)Anthracene	10	IU
218-01-9-----	Chrysene	10	IU
117-81-7-----	bis(2-Ethylhexyl)Phthalate	6	IJ
117-84-0-----	Di-n-Octyl Phthalate	10	IU
205-99-2-----	Benzo(b)Fluoranthene	10	IU
207-08-9-----	Benzo(k)Fluoranthene	10	IU
50-32-8-----	Benzo(a)Pyrene	10	IU
193-39-5-----	Indeno(1,2,3-cd)Pyrene	10	IU
53-70-3-----	Dibenz(a,h)Anthracene	10	IU
191-24-2-----	Benzo(g,h,i)Perylene	10	IU

(1) - Cannot be separated from Diphenylamine



1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W023

b Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10144

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3715

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

Number TICs found: 16

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.08	15	13
2.	UNKNOWN	10.65	6.0	13
3.	UNKNOWN	11.24	42	13
4.	UNKNOWN	12.26	110	13
5.	UNKNOWN ACID	12.47	27	13
6.	UNKNOWN	13.06	7.0	13
7.	UNKNOWN	19.27	5.0	13
8.	UNKNOWN	19.73	7.0	13
9.	UNKNOWN HYDROCARBON	20.61	7.0	13
10.	UNKNOWN HYDROCARBON	22.07	7.0	13
11.	UNKNOWN HYDROCARBON	23.45	6.0	13
12.	UNKNOWN HYDROCARBON	24.78	5.0	13
13.	UNKNOWN	26.77	49	183
14.	UNKNOWN HYDROCARBON	31.63	5.0	13
15.	UNKNOWN	33.59	12	13
16.	UNKNOWN	43.78	22	13

1B  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W024

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10145

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3716

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/L

Q

108-95-2	Phenol	10	10
111-44-4	bis(2-Chloroethyl)Ether	10	10
95-57-8	2-Chlorophenol	10	10
541-73-1	1,3-Dichlorobenzene	10	10
106-46-7	1,4-Dichlorobenzene	10	10
100-51-6	Benzyl Alcohol	10	10
95-50-1	1,2-Dichlorobenzene	10	10
95-48-7	2-Methylphenol	10	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10	10
106-44-5	4-Methylphenol	10	10
621-64-7	N-Nitroso-Di-n-Propylamine	10	10
67-72-1	Hexachloroethane	10	10
98-95-3	Nitrobenzene	10	10
78-59-1	Isophorone	10	10
88-75-5	2-Nitrophenol	10	10
105-67-9	2,4-Dimethylphenol	10	10
65-85-0	Benzoic Acid	50	10
111-91-1	bis(2-Chloroethoxy)Methane	10	10
120-83-2	2,4-Dichlorophenol	10	10
120-82-1	1,2,4-Trichlorobenzene	10	10
91-20-3	Naphthalene	10	10
106-47-8	4-Chloroaniline	10	10
87-68-3	Hexachlorobutadiene	10	10
59-50-7	4-Chloro-3-Methylphenol	10	10
91-57-6	2-Methylnaphthalene	10	10
77-47-4	Hexachlorocyclopentadiene	10	10
88-06-2	2,4,6-Trichlorophenol	10	10
95-95-4	2,4,5-Trichlorophenol	50	10
91-58-7	2-Chloronaphthalene	10	10
88-74-4	2-Nitroaniline	50	10
131-11-3	Dimethyl Phthalate	10	10
208-96-8	Acenaphthylene	10	10
606-20-2	2,6-Dinitrotoluene	10	10

1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W024

b Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10145

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3716

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	10
83-32-9	Acenaphthene	10	10
51-28-5	2,4-Dinitrophenol	50	10
100-02-7	4-Nitrophenol	50	10
132-64-9	Dibenzofuran	10	10
121-14-2	2,4-Dinitrotoluene	10	10
84-66-2	Diethylphthalate	10	10
7005-72-3	4-Chlorophenyl-phenylether	10	10
86-73-7	Fluorene	10	10
100-10-6	4-Nitroaniline	50	10
534-52-1	4,6-Dinitro-2-Methylphenol	50	10
86-30-6	N-Nitrosodiphenylamine (1)	10	10
101-55-3	4-Bromophenyl-phenylether	10	10
118-74-1	Hexachlorobenzene	10	10
87-86-5	Pentachlorophenol	50	10
85-01-8	Phenanthrene	10	10
120-12-7	Anthracene	10	10
84-74-2	Di-n-Butylphthalate	1	10
206-44-0	Fluoranthene	10	10
129-00-0	Pyrene	10	10
85-68-7	Butylbenzylphthalate	10	10
91-94-1	3,3'-Dichlorobenzidine	20	10
56-55-3	Benzo(a)Anthracene	10	10
218-01-9	Chrysene	10	10
117-81-7	bis(2-Ethylhexyl)Phthalate	7	10
117-84-0	Di-n-Octyl Phthalate	10	10
205-99-2	Benzo(b)Fluoranthene	10	10
207-08-9	Benzo(k)Fluoranthene	10	10
50-32-8	Benzo(a)Pyrene	10	10
193-39-5	Indeno(1,2,3-cd)Pyrene	10	10
53-70-3	Dibenz(a,h)Anthracene	10	10
191-24-2	Benzo(g,h,i)Perylene	10	10

(1) - Cannot be separated from Diphenylamine

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W024

Lab Name: E & E INC.

Contract:

Lab Code: EANDF

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10145

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3716

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

Number TICs found: 13

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	19.27	4.013	
2.	UNKNOWN HYDROCARBON	20.62	6.013	
3.	UNKNOWN HYDROCARBON	22.06	6.013	
4.	UNKNOWN HYDROCARBON	23.46	5.013	
5.	UNKNOWN HYDROCARBON	24.78	5.013	
6.	UNKNOWN	26.77	23 183	
7.	UNKNOWN HYDROCARBON	30.58	6.013	
8.	UNKNOWN HYDROCARBON	31.60	10 13	
9.	UNKNOWN HYDROCARBON	32.59	5.013	
10.	UNKNOWN	33.59	13 13	
11.	UNKNOWN	36.70	6.013	
12.	UNKNOWN	42.59	12 13	
13.	UNKNOWN	43.77	21 13	

18  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W025

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10146

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3717

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	9	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	6	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W025

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10146

Sample wt/Vol: 1000 (g/mL) ML

Lab File ID: G3717

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	UG/L	
99-09-2	3-Nitroaniline	50	10	
83-32-9	Acenaphthene	10	10	
51-28-5	2,4-Dinitrophenol	50	10	
100-02-7	4-Nitrophenol	50	10	
132-64-9	Dibenzofuran	10	10	
121-14-2	2,4-Dinitrotoluene	10	10	
84-66-2	Diethylphthalate	10	10	
7005-72-3	4-Chlorophenyl-phenylether	10	10	
86-73-7	Fluorene	10	10	
100-10-6	4-Nitroaniline	50	10	
534-52-1	4,6-Dinitro-2-Methylphenol	50	10	
86-30-6	N-Nitrosodiphenylamine (1)	10	10	
101-55-3	4-Bromophenyl-phenylether	10	10	
118-74-1	Hexachlorobenzene	10	10	
87-86-5	Pentachlorophenol	50	10	
85-01-8	Phenanthrene	10	10	
120-12-7	Anthracene	10	10	
84-74-2	Di-n-Butylphthalate	10	10	
206-44-0	Fluoranthene	10	10	
129-00-0	Pyrene	10	10	
85-68-7	Butylbenzylphthalate	10	10	
91-94-1	3,3'-Dichlorobenzidine	20	10	
56-55-3	Benzo(a)Anthracene	10	10	
218-01-9	Chrysene	10	10	
117-81-7	bis(2-Ethylhexyl)Phthalate	4	10	
117-84-0	Di-n-Octyl Phthalate	10	10	
205-99-2	Benzo(b)Fluoranthene	10	10	
207-08-9	Benzo(k)Fluoranthene	10	10	
50-32-8	Benzo(a)Pyrene	10	10	
193-39-5	Indeno(1,2,3-cd)Pyrene	10	10	
53-70-3	Dibenz(a,h)Anthracene	10	10	
191-24-2	Benzo(g,h,i)Perylene	10	10	

(1) - Cannot be separated from Diphenylamine

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W025

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10146

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3717

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

Number TICs found: 11

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Ethyl Dimethyl Benzene Isome	11.30	6.013	
2.	UNKNOWN PAH	12.97	5.013	
3.	Methyl Naphthalene Isomer	15.79	5.013	
4.	UNKNOWN HYDROCARBON	20.61	4.013	
5.	UNKNOWN HYDROCARBON	22.07	6.013	
6.	UNKNOWN HYDROCARBON	24.78	5.013	
7. 10544500	Molecular Sulfur	26.36	9.013	
8.	UNKNOWN	33.58	6.013	
9.	UNKNOWN	40.43	5.013	
10.	UNKNOWN	42.62	11.13	
11.	UNKNOWN	43.77	9.013	

1B  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W0250

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10147

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3718

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) UG/L

Q

108-95-2	Phenol	10	10
111-44-4	bis(2-Chloroethyl)Ether	10	10
95-57-8	2-Chlorophenol	10	10
541-73-1	1,3-Dichlorobenzene	10	10
106-46-7	1,4-Dichlorobenzene	10	10
100-51-6	Benzyl Alcohol	10	10
95-50-1	1,2-Dichlorobenzene	10	10
95-48-7	2-Methylphenol	10	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10	10
106-44-5	4-Methylphenol	10	10
621-64-7	N-Nitroso-Di-n-Propylamine	10	10
67-72-1	Hexachloroethane	10	10
98-95-3	Nitrobenzene	10	10
78-59-1	Isophorone	10	10
88-75-5	2-Nitrophenol	10	10
105-67-9	2,4-Dimethylphenol	10	10
65-85-0	Benzoic Acid	50	10
111-91-1	bis(2-Chloroethoxy)Methane	10	10
120-83-2	2,4-Dichlorophenol	10	10
120-82-1	1,2,4-Trichlorobenzene	10	10
91-20-3	Naphthalene	4	10
106-47-8	4-Chloroaniline	10	10
87-68-3	Hexachlorobutadiene	10	10
59-50-7	4-Chloro-3-Methylphenol	10	10
91-57-6	2-Methylnaphthalene	2	10
77-47-4	Hexachlorocyclopentadiene	10	10
88-06-2	2,4,6-Trichlorophenol	10	10
95-95-4	2,4,5-Trichlorophenol	50	10
91-58-7	2-Chloronaphthalene	10	10
88-74-4	2-Nitroaniline	50	10
131-11-3	Dimethyl Phthalate	10	10
208-96-8	Acenaphthylene	10	10
606-20-2	2,6-Dinitrotoluene	10	10



1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W025D

Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10147

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3718

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) US/L	Q
99-09-2	3-Nitroaniline	50	10
83-32-9	Acenaphthene	10	10
51-28-5	2,4-Dinitrophenol	50	10
100-02-7	4-Nitrophenol	50	10
132-64-9	Dibenzofuran	10	10
121-14-2	2,4-Dinitrotoluene	10	10
84-66-2	Diethylphthalate	10	10
7005-72-3	4-Chlorophenyl-phenylether	10	10
86-73-7	Fluorene	10	10
100-10-6	4-Nitroaniline	50	10
534-52-1	4,6-Dinitro-2-Methylphenol	50	10
96-30-6	N-Nitrosodiphenylamine (1)	10	10
101-55-3	4-Bromophenyl-phenylether	10	10
118-74-1	Hexachlorobenzene	10	10
87-86-5	Pentachlorophenol	50	10
85-01-8	Phenanthrene	10	10
120-12-7	Anthracene	10	10
84-74-2	Di-n-Butylphthalate	10	10
206-44-0	Fluoranthene	10	10
129-00-0	Pyrene	10	10
85-68-7	Butylbenzylphthalate	10	10
91-94-1	3,3'-Dichlorobenzidine	20	10
56-55-3	Benzo(a)Anthracene	10	10
218-01-9	Chrysene	10	10
117-81-7	bis(2-Ethylhexyl)Phthalate	4	10
117-84-0	Di-n-Octyl Phthalate	10	10
205-99-2	Benzo(b)Fluoranthene	10	10
207-08-9	Benzo(k)Fluoranthene	10	10
50-32-8	Benzo(a)Pyrene	10	10
193-39-5	Indeno(1,2,3-cd)Pyrene	10	10
53-70-3	Dibenz(a,h)Anthracene	10	10
191-24-2	Benzo(g,h,i)Perylene	10	10

(1) - Cannot be separated from Diphenylamine

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

W025D

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10147

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3718

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

Number TICs found: 9

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	20.61	5.010	
2.	UNKNOWN HYDROCARBON	22.07	6.010	
3.	UNKNOWN HYDROCARBON	23.46	4.010	
4.	UNKNOWN HYDROCARBON	24.77	4.010	
5.	UNKNOWN HYDROCARBON	31.60	7.010	
6.	UNKNOWN	33.59	12.10	
7.	UNKNOWN	40.50	16.010	
8.	UNKNOWN	42.60	5.010	
9.	UNKNOWN	43.77	23.10	

1B  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WFB06

Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10148

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3719

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	10
111-44-4	bis(2-Chloroethyl)Ether	10	10
95-57-8	2-Chlorophenol	10	10
541-73-1	1,3-Dichlorobenzene	10	10
106-46-7	1,4-Dichlorobenzene	10	10
100-51-6	Benzyl Alcohol	10	10
95-50-1	1,2-Dichlorobenzene	10	10
95-48-7	2-Methylphenol	10	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10	10
106-44-5	4-Methylphenol	10	10
621-64-7	N-Nitroso-Di-n-Propylamine	10	10
67-72-1	Hexachloroethane	10	10
98-95-3	Nitrobenzene	10	10
78-59-1	Isophorone	10	10
88-75-5	2-Nitrophenol	10	10
105-67-9	2,4-Dimethylphenol	10	10
65-85-0	Benzoic Acid	50	10
111-91-1	bis(2-Chloroethoxy)Methane	10	10
120-83-2	2,4-Dichlorophenol	10	10
120-82-1	1,2,4-Trichlorobenzene	10	10
91-20-3	Naphthalene	10	10
106-47-8	4-Chloroaniline	10	10
87-68-3	Hexachlorobutadiene	10	10
59-50-7	4-Chloro-3-Methylphenol	10	10
91-57-6	2-Methylnaphthalene	10	10
77-47-4	Hexachlorocyclopentadiene	10	10
88-06-2	2,4,6-Trichlorophenol	10	10
95-95-4	2,4,5-Trichlorophenol	50	10
91-58-7	2-Chloronaphthalene	10	10
88-74-4	2-Nitroaniline	50	10
131-11-3	Dimethyl Phthalate	10	10
208-96-8	Acenaphthylene	10	10
606-20-2	2,6-Dinitrotoluene	10	10

1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WFB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10148

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3719

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2-----	3-Nitroaniline	50	1U
83-32-9-----	Acenaphthene	10	1U
51-28-5-----	2,4-Dinitrophenol	50	1U
100-02-7-----	4-Nitrophenol	50	1U
132-64-9-----	Dibenzofuran	10	1U
121-14-2-----	2,4-Dinitrotoluene	10	1U
84-66-2-----	Diethylphthalate	10	1U
7005-72-3-----	4-Chlorophenyl-phenylether	10	1U
86-73-7-----	Fluorene	10	1U
100-10-6-----	4-Nitroaniline	50	1U
534-52-1-----	4,6-Dinitro-2-Methylphenol	50	1U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	1U
101-55-3-----	4-Bromophenyl-phenylether	10	1U
118-74-1-----	Hexachlorobenzene	10	1U
87-86-5-----	Pentachlorophenol	50	1U
85-01-8-----	Phenanthrene	10	1U
120-12-7-----	Anthracene	10	1U
84-74-2-----	Di-n-Butylphthalate	10	1U
206-44-0-----	Fluoranthene	10	1U
129-00-0-----	Pyrene	10	1U
85-68-7-----	Butylbenzylphthalate	10	1U
91-94-1-----	3,3'-Dichlorobenzidine	20	1U
56-55-3-----	Benzo(a)Anthracene	10	1U
218-01-9-----	Chrysene	10	1U
117-81-7-----	bis(2-Ethylhexyl)Phthalate	4	1BJ
117-84-0-----	Di-n-Octyl Phthalate	10	1U
205-99-2-----	Benzo(b)Fluoranthene	10	1U
207-08-9-----	Benzo(k)Fluoranthene	10	1U
50-32-8-----	Benzo(a)Pyrene	10	1U
193-39-5-----	Indeno(1,2,3-cd)Pyrene	10	1U
53-70-3-----	Dibenz(a,h)Anthracene	10	1U
191-24-2-----	Benzo(g,h,i)Perylene	10	1U

(1) - Cannot be separated from Diphenylamine

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WFB06

Company Name: E & E INC.

Contract:

Lab Code: EANDF

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10148

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3719

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

Number TICs found: 7

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	20.61	5.01J	
2.	UNKNOWN HYDROCARBON	22.07	7.01J	
3.	UNKNOWN HYDROCARBON	23.45	5.01J	
4.	UNKNOWN HYDROCARBON	24.78	7.01J	
5.	UNKNOWN	26.78	48 18J	
6.	UNKNOWN	42.62	15 1J	
7.	UNKNOWN	44.56	4.01J	

1B  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WRB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10149

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3720

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec.

dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	10
111-44-4	bis(2-Chloroethyl)Ether	10	10
95-57-8	2-Chlorophenol	10	10
541-73-1	1,3-Dichlorobenzene	10	10
106-46-7	1,4-Dichlorobenzene	10	10
100-51-6	Benzyl Alcohol	10	10
95-50-1	1,2-Dichlorobenzene	10	10
95-48-7	2-Methylphenol	10	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10	10
106-44-5	4-Methylphenol	10	10
621-64-7	N-Nitroso-Di-n-Propylamine	10	10
67-72-1	Hexachloroethane	10	10
98-95-3	Nitrobenzene	10	10
78-59-1	Isophorone	10	10
88-75-5	2-Nitrophenol	10	10
105-67-9	2,4-Dimethylphenol	10	10
65-85-0	Benzoic Acid	50	10
111-91-1	bis(2-Chloroethoxy)Methane	10	10
120-83-2	2,4-Dichlorophenol	10	10
120-82-1	1,2,4-Trichlorobenzene	10	10
91-20-3	Naphthalene	10	10
106-47-8	4-Chloroaniline	10	10
87-68-3	Hexachlorobutadiene	10	10
59-50-7	4-Chloro-3-Methylphenol	10	10
91-57-6	2-Methylnaphthalene	10	10
77-47-4	Hexachlorocyclopentadiene	10	10
88-06-2	2,4,6-Trichlorophenol	10	10
95-95-4	2,4,5-Trichlorophenol	50	10
91-58-7	2-Chloronaphthalene	10	10
88-74-4	2-Nitroaniline	50	10
131-11-3	Dimethyl Phthalate	10	10
208-96-8	Acenaphthylene	10	10
606-20-2	2,6-Dinitrotoluene	10	10

1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WRB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10149

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 63720

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	10
83-32-9	Acenaphthene	10	10
51-28-5	2,4-Dinitrophenol	50	10
100-02-7	4-Nitrophenol	50	10
132-64-9	Dibenzofuran	10	10
121-14-2	2,4-Dinitrotoluene	10	10
84-66-2	Diethylphthalate	10	10
7005-72-3	4-Chlorophenyl-phenylether	10	10
86-73-7	Fluorene	10	10
100-10-6	4-Nitroaniline	50	10
534-52-1	4,6-Dinitro-2-Methylphenol	50	10
86-30-6	N-Nitrosodiphenylamine (1)	10	10
101-55-3	4-Bromophenyl-phenylether	10	10
118-74-1	Hexachlorobenzene	10	10
87-86-5	Pentachlorophenol	50	10
85-01-8	Phenanthrene	10	10
120-12-7	Anthracene	10	10
84-74-2	Di-n-Butylphthalate	10	10
206-44-0	Fluoranthene	10	10
129-00-0	Pyrene	10	10
85-68-7	Butylbenzylphthalate	10	10
91-94-1	3,3'-Dichlorobenzidine	20	10
56-55-3	Benzo(a)Anthracene	10	10
218-01-9	Chrysene	10	10
117-81-7	bis(2-Ethylhexyl)Phthalate	5	10
117-84-0	Di-n-Octyl Phthalate	10	10
205-99-2	Benzo(b)Fluoranthene	10	10
207-08-9	Benzo(k)Fluoranthene	10	10
50-32-8	Benzo(a)Pyrene	10	10
193-39-5	Indeno(1,2,3-cd)Pyrene	10	10
53-70-3	Dibenz(a,h)Anthracene	10	10
191-24-2	Benzo(g,h,i)Perylene	10	10

(1) - Cannot be separated from Diphenylamine

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

WRB06

Lab Name: E & E INC.

Contract:

Lab Code: EANDF

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10149

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3720

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/14/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

Number TICs found: 6

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	20.60	5.013	
2.	UNKNOWN HYDROCARBON	22.06	7.013	
3.	UNKNOWN HYDROCARBON	23.46	7.013	
4.	UNKNOWN HYDROCARBON	24.79	7.013	
5.	UNKNOWN	26.77	53.183	
6.	UNKNOWN	40.49	8.013	



2A  
WATER VOLATILE SURROGATE RECOVERY

Lab Name: E & E INC.

Contract:

Code: EAND E

Case No.: 9101\_052

SAS No.:

SDG No.:

EPA	S1	S2	S3	OTHER	TOT
SAMPLE NO.	(TOL)#	(BFB)#	(DCE)#		OUT
=====	=====	=====	=====	=====	=====
01W021	95	88	94	0	0
02W024	96	90	101	0	0
03W025	97	91	104	0	0
04W025D	104	87	97	0	0
05WFB06	94	82 *	98	0	1
06WFB06 <del>DL</del>	97	89	95	0	0
07WPB06	102	94	110	0	0
08WRB06	100	93	110	0	0
09WTB06	108	92	101	0	0
10WTB06MS	101	89	100	0	0
11WTB06MSD	105	86	102	0	0
12VBLKW1	101	89	95	0	0
13VBLKW2	105	89	94	0	0
14VBLKW3	101	94	99	0	0

6/17/91 Dms

QC LIMITS

S1 (TOL) = Toluene-d8 ( 88-110)

S2 (BFB) = Bromofluorobenzene ( 86-115)

S3 (DCE) = 1,2-Dichloroethane-d4 ( 76-114)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

2A  
WATER VOLATILE SURROGATE RECOVERY

Lab Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 9101\_052 SAS No.:

SDG No.:

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	W021	95	88	94	0	0
02	W023	101	95	110	0	0
03	W024	96	90	101	0	0
04	W025	97	91	104	0	0
05	W025D	104	87	97	0	0
06	WFB06	94	82 *	98	0	1
07	WFB06 <del>DL</del>	97	89	95	0	0
08	WPB06	102	94	110	0	0
09	WRB06	100	93	110	0	0
10	WTB06	108	92	101	0	0
11	WTB06MS	101	89	100	0	0
12	WTB06MSD	105	86	102	0	0
13	VBLKW1	101	89	95	0	0
14	VBLKW2	105	89	94	0	0
15	VBLKW3	101	94	99	0	0

*6/15/91*

QC LIMITS

S1 (TOL) = Toluene-d8 ( 88-110)  
 S2 (BFB) = Bromofluorobenzene ( 86-115)  
 S3 (DCE) = 1,2-Dichloroethane-d4 ( 76-114)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

2C  
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: E & E INC.

Contract:

Job Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

EPA	S1	S2	S3	S4	S5	S6	OTHER	TOT
SAMPLE NO.	(NBZ)#	(FBP)#	(TPH)#	(PHL)#	(2FP)#	(TBP)#		OUT
-----	-----	-----	-----	-----	-----	-----	-----	----
01 W021	72	64	69	35	56	92	0	0
02 W023	76	77	74	30	48	68	0	0
03 W024	70	72	68	29	45	64	0	0
04 W025	61	64	66	25	41	69	0	0
05 W025D	61	67	70	24	42	62	0	0
06 WFB06	62	68	77	24	38	58	0	0
07 WRB06	62	63	72	28	45	67	0	0
08 SBLKW1	49	53	51	5 *	36	46	0	1

QC LIMITS

S1 (NBZ) = Nitrobenzene-d5 ( 35-114)  
 S2 (FBP) = 2-Fluorobiphenyl ( 43-116)  
 S3 (TPH) = Terphenyl ( 33-141)  
 S4 (PHL) = Phenol-d5 ( 10-94 )  
 S5 (2FP) = 2-Fluorophenol ( 21-100)  
 S6 (TBP) = 2,4,6-Tribromophenol ( 10-123)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

2C  
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: E & E INC.

Contract:

Lab Code: EANDC

Case No.: 9101\_052

SAS No.:

SDG No.:

EPA	S1	S2	S3	S4	S5	S6	OTHER	TOT
SAMPLE NO.	(NBZ)#	(FBP)#	(TPH)#	(PHL)#	(2FP)#	(TBP)#		OUT
=====	=====	=====	=====	=====	=====	=====	=====	=====
01 W021	72	64	69	35	56	92	0	0
02 W023	76	77	74	30	48	68	0	0
03 W024	70	72	68	29	45	64	0	0
04 W025	61	64	66	25	41	69	0	0
05 W025D	61	67	70	24	42	62	0	0
06 WFS06	62	68	77	24	38	58	0	0
07 WRB06	62	63	72	28	45	67	0	0
08 SBLKW1	49	53	51	5 *	36	46	0	1

QC LIMITS

S1 (NBZ) = Nitrobenzene-d5 ( 35-114)  
 S2 (FBP) = 2-Fluorobiphenyl ( 43-116)  
 S3 (TPH) = Terphenyl ( 33-141)  
 S4 (PHL) = Phenol-d5 ( 10-94 )  
 S5 (2FP) = 2-Fluorophenol ( 21-100)  
 S6 (TBP) = 2,4,6-Tribromophenol ( 10-123)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 9101\_052 SAS No.: SDG No.:

Lab File ID: G3698 Lab Sample ID: SBLKW1

Date Extracted: 05/09/91 Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/13/91 Time Analyzed: 1311

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: 7002G

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA	LAB	LAB	DATE
SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
=====	=====	=====	=====
01IW021	10143	G3714	05/14/91
02IW023	10144	G3715	05/14/91
03IW024	10145	G3716	05/14/91
04IW025	10146	G3717	05/14/91
05IW025D	10147	G3718	05/14/91
06IWFB06	10148	G3719	05/14/91
07IWRB06	10149	G3720	05/14/91

COMMENTS:

48  
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Lab File ID: G3698

Lab Sample ID: SBLKW1

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/13/91

Time Analyzed: 1311

Matrix: (soil/water) WATER

Level: (low/med) LOW

Instrument ID: 70026

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01IW021	10143	G3714	05/14/91
02IW023	10144	G3715	05/14/91
03IW024	10145	G3716	05/14/91
04IW025	10146	G3717	05/14/91
05IW025D	10147	G3718	05/14/91
06IWFB06	10148	G3719	05/14/91
07IWRB06	10149	G3720	05/14/91

COMMENTS:

18  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKW1

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: SBLKW1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3698

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/13/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	10
111-44-4	bis(2-Chloroethyl)Ether	10	10
95-57-8	2-Chlorophenol	10	10
541-73-1	1,3-Dichlorobenzene	10	10
106-46-7	1,4-Dichlorobenzene	10	10
100-51-6	Benzyl Alcohol	10	10
95-50-1	1,2-Dichlorobenzene	10	10
95-48-7	2-Methylphenol	10	10
39638-32-9	bis(2-Chloroisopropyl)Ether	10	10
106-44-5	4-Methylphenol	10	10
621-64-7	N-Nitroso-Di-n-Propylamine	10	10
67-72-1	Hexachloroethane	10	10
98-95-3	Nitrobenzene	10	10
78-59-1	Isophorone	10	10
88-75-5	2-Nitrophenol	10	10
105-67-9	2,4-Dimethylphenol	10	10
65-85-0	Benzoic Acid	50	10
111-91-1	bis(2-Chloroethoxy)Methane	10	10
120-83-2	2,4-Dichlorophenol	10	10
120-82-1	1,2,4-Trichlorobenzene	10	10
91-20-3	Naphthalene	10	10
106-47-8	4-Chloroaniline	10	10
87-68-3	Hexachlorobutadiene	10	10
59-50-7	4-Chloro-3-Methylphenol	10	10
91-57-6	2-Methylnaphthalene	10	10
77-47-4	Hexachlorocyclopentadiene	10	10
88-06-2	2,4,6-Trichlorophenol	10	10
95-95-4	2,4,5-Trichlorophenol	50	10
91-58-7	2-Chloronaphthalene	10	10
88-74-4	2-Nitroaniline	50	10
131-11-3	Dimethyl Phthalate	10	10
208-96-8	Acenaphthylene	10	10
606-20-2	2,6-Dinitrotoluene	10	10

1C  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKW1

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: SBLKW1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3698

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

dec.

Date Extracted: 05/02/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/13/91

GPC Cleanup: (Y/N) N

pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

99-09-2-----	3-Nitroaniline	50	U
83-32-9-----	Acenaphthene	10	U
51-28-5-----	2,4-Dinitrophenol	50	U
100-02-7-----	4-Nitrophenol	50	U
132-64-9-----	Dibenzofuran	10	U
121-14-2-----	2,4-Dinitrotoluene	10	U
84-66-2-----	Diethylphthalate	10	U
7005-72-3-----	4-Chlorophenyl-phenylether	10	U
86-73-7-----	Fluorene	10	U
100-10-6-----	4-Nitroaniline	50	U
534-52-1-----	4,6-Dinitro-2-Methylphenol	50	U
86-30-6-----	N-Nitrosodiphenylamine (1)	10	U
101-55-3-----	4-Bromophenyl-phenylether	10	U
118-74-1-----	Hexachlorobenzene	10	U
87-86-5-----	Pentachlorophenol	50	U
35-01-8-----	Phenanthrene	10	U
120-12-7-----	Anthracene	10	U
84-74-2-----	Di-n-Butylphthalate	10	U
206-44-0-----	Fluoranthene	10	U
129-00-0-----	Pyrene	10	U
85-68-7-----	Butylbenzylphthalate	10	U
91-94-1-----	3,3'-Dichlorobenzidine	20	U
56-55-3-----	Benzo(a)Anthracene	10	U
218-01-9-----	Chrysene	10	U
117-81-7-----	bis(2-Ethylhexyl)Phthalate	4	U
117-84-0-----	Di-n-Octyl Phthalate	10	U
205-99-2-----	Benzo(b)Fluoranthene	10	U
207-08-9-----	Benzo(k)Fluoranthene	10	U
50-32-8-----	Benzo(a)Pyrene	10	U
193-39-5-----	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3-----	Dibenz(a,h)Anthracene	10	U
191-24-2-----	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine



1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKW1

Company Name: E & E INC.

Contract:

Lab Code: EANDC

Case No.: 9101\_052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: SBLKW1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: G3698

Level: (low/med) LOW

Date Received:

% Moisture: not dec. dec.

Date Extracted: 05/09/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/13/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

Number TICs found: 5

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	9.26	41	10
2.	UNKNOWN	9.99	43	10
3.	UNKNOWN	10.95	10	10
4.	UNKNOWN	13.97	31	10
5.	UNKNOWN	27.07	15	10

10  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W021

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10143

Sample wt/vol: 1000 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/08/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/23/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.

COMPOUND

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

Q

319-84-6-----	alpha-BHC	0.050IU
319-85-7-----	beta-BHC	0.050IU
319-86-8-----	delta-BHC	0.050IU
58-89-9-----	gamma-BHC (Lindane)	0.050IU
76-44-8-----	Heptachlor	0.050IU
309-00-2-----	Aldrin	0.050IU
1024-57-3-----	Heptachlor epoxide	0.050IU
959-98-8-----	Endosulfan I	0.050IU
60-57-1-----	Dieldrin	0.10IU
72-55-9-----	4,4'-DDE	0.10IU
72-20-8-----	Endrin	0.10IU
33213-65-9-----	Endosulfan II	0.10IU
72-54-8-----	4,4'-DDD	0.10IU
1031-07-8-----	Endosulfan sulfate	0.10IU
50-29-3-----	4,4'-DDT	0.10IU
72-43-5-----	Methoxychlor	0.50IU
53494-70-5-----	Endrin ketone	0.10IU
5103-71-9-----	alpha-Chlordane	0.50IU
5103-74-2-----	gamma-Chlordane	0.50IU
8001-35-2-----	Toxaphene	1.0IU
12674-11-2-----	Aroclor-1016	0.50IU
11104-28-2-----	Aroclor-1221	0.50IU
11141-16-5-----	Aroclor-1232	0.50IU
53469-21-9-----	Aroclor-1242	0.50IU
12672-29-6-----	Aroclor-1248	0.50IU
11097-69-1-----	Aroclor-1254	1.0IU
11096-82-5-----	Aroclor-1260	1.0IU

1D  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W023

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10144

Sample wt/vol: 1000 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/08/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/23/91

GPC Cleanup: (Y/N) N pH;

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6	alpha-BHC	0.050IU	
319-85-7	beta-BHC	0.050IU	
319-86-8	delta-BHC	0.050IU	
58-89-9	gamma-BHC (Lindane)	0.050IU	
76-44-8	Heptachlor	0.050IU	
309-00-2	Aldrin	0.050IU	
1024-57-3	Heptachlor epoxide	0.050IU	
959-98-8	Endosulfan I	0.050IU	
60-57-1	Dieldrin	0.10IU	
72-55-9	4,4'-DDE	0.10IU	
72-20-8	Endrin	0.10IU	
33213-65-9	Endosulfan II	0.10IU	
72-54-8	4,4'-DDD	0.10IU	
1031-07-8	Endosulfan sulfate	0.10IU	
50-29-3	4,4'-DDT	0.10IU	
72-43-5	Methoxychlor	0.50IU	
53494-70-5	Endrin ketone	0.10IU	
5103-71-9	alpha-Chlordane	0.50IU	
5103-74-2	gamma-Chlordane	0.50IU	
8001-35-2	Toxaphene	1.0IU	
12674-11-2	Aroclor-1016	0.50IU	
11104-28-2	Aroclor-1221	0.50IU	
11141-16-5	Aroclor-1232	0.50IU	
53469-21-9	Aroclor-1242	0.50IU	
12672-29-6	Aroclor-1248	0.50IU	
11097-69-1	Aroclor-1254	1.0IU	
11096-82-5	Aroclor-1260	1.0IU	

Lab Name: E & E INC.

Contract:

W024

Lab Code: EANDE

Case No.: 052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10145

Sample wt/vol: 1000 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/08/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/23/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO. COMPOUND CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L Q

319-84-6	alpha-BHC	0.050IU	
319-85-7	beta-BHC	0.050IU	
319-86-8	delta-BHC	0.050IU	
58-89-9	gamma-BHC (Lindane)	0.050IU	
76-44-8	Heptachlor	0.050IU	
309-00-2	Aldrin	0.050IU	
1024-57-3	Heptachlor epoxide	0.050IU	
959-98-8	Endosulfan I	0.050IU	
60-57-1	Dieldrin	0.10IU	
72-55-9	4,4'-DDE	0.10IU	
72-20-8	Endrin	0.10IU	
33213-65-9	Endosulfan II	0.10IU	
72-54-8	4,4'-DDD	0.10IU	
1031-07-8	Endosulfan sulfate	0.10IU	
50-29-3	4,4'-DDT	0.10IU	
72-43-5	Methoxychlor	0.50IU	
53494-70-5	Endrin ketone	0.10IU	
5103-71-9	alpha-Chlordane	0.50IU	
5103-74-2	gamma-Chlordane	0.50IU	
8001-35-2	Toxaphene	1.0IU	
12674-11-2	Aroclor-1016	0.50IU	
11104-28-2	Aroclor-1221	0.50IU	
11141-16-5	Aroclor-1232	0.50IU	
53469-21-9	Aroclor-1242	0.50IU	
12672-29-6	Aroclor-1248	0.50IU	
11097-69-1	Aroclor-1254	1.0IU	
11096-82-5	Aroclor-1260	1.0IU	

1D  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W025

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10146

Sample wt/vol: 1000 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/08/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/23/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----	alpha-BHC	0.050IU	
319-85-7-----	beta-BHC	0.050IU	
319-86-8-----	delta-BHC	0.050IU	
58-89-9-----	gamma-BHC (Lindane)	0.050IU	
76-44-8-----	Heptachlor	0.050IU	
309-00-2-----	Aldrin	0.050IU	
1024-57-3-----	Heptachlor epoxide	0.050IU	
959-98-8-----	Endosulfan I	0.050IU	
60-57-1-----	Dieldrin	0.10IU	
72-55-9-----	4,4'-DDE	0.10IU	
72-20-8-----	Endrin	0.10IU	
33213-65-9-----	Endosulfan II	0.10IU	
72-54-8-----	4,4'-DDD	0.10IU	
1031-07-8-----	Endosulfan sulfate	0.10IU	
50-29-3-----	4,4'-DDT	0.10IU	
72-43-5-----	Methoxychlor	0.50IU	
53494-70-5-----	Endrin ketone	0.10IU	
5103-71-9-----	alpha-Chlordane	0.50IU	
5103-74-2-----	gamma-Chlordane	0.50IU	
8001-35-2-----	Toxaphene	1.0IU	
12674-11-2-----	Aroclor-1016	0.50IU	
11104-28-2-----	Aroclor-1221	0.50IU	
11141-16-5-----	Aroclor-1232	0.50IU	
53469-21-9-----	Aroclor-1242	0.50IU	
12672-29-6-----	Aroclor-1248	0.50IU	
11097-69-1-----	Aroclor-1254	1.0IU	
11096-82-5-----	Aroclor-1260	1.0IU	

1D  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

W0250

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10147

Sample wt/vol: 1000 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/08/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/23/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6-----	alpha-BHC	0.050IU	
319-85-7-----	beta-BHC	0.050IU	
319-86-8-----	delta-BHC	0.050IU	
58-89-9-----	gamma-BHC (Lindane)	0.050IU	
76-44-8-----	Heptachlor	0.050IU	
309-00-2-----	Aldrin	0.050IU	
1024-57-3-----	Heptachlor epoxide	0.050IU	
959-98-8-----	Endosulfan I	0.050IU	
60-57-1-----	Dieldrin	0.10IU	
72-55-9-----	4,4'-DDE	0.10IU	
72-20-8-----	Endrin	0.10IU	
33213-65-9-----	Endosulfan II	0.10IU	
72-54-8-----	4,4'-DDD	0.10IU	
1031-07-8-----	Endosulfan sulfate	0.10IU	
50-29-3-----	4,4'-DDT	0.10IU	
72-43-5-----	Methoxychlor	0.50IU	
53494-70-5-----	Endrin ketone	0.10IU	
5103-71-9-----	alpha-Chlordane	0.50IU	
5103-74-2-----	gamma-Chlordane	0.50IU	
8001-35-2-----	Toxaphene	1.0IU	
12674-11-2-----	Aroclor-1016	0.50IU	
11104-28-2-----	Aroclor-1221	0.50IU	
11141-16-5-----	Aroclor-1232	0.50IU	
53469-21-9-----	Aroclor-1242	0.50IU	
12672-29-6-----	Aroclor-1248	0.50IU	
11097-69-1-----	Aroclor-1254	1.0IU	
11096-82-5-----	Aroclor-1260	1.0IU	

1D  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

WFB06

Lab Name: E & E INC.

Contract:

Lab Code: EAND E

Case No.: 052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 10148

Sample wt/vol: 1000 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Date Received: 05/04/91

% Moisture: not dec. dec.

Date Extracted: 05/08/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/23/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.

COMPOUND

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

Q

319-84-6	alpha-BHC	0.050IU
319-85-7	beta-BHC	0.050IU
319-86-8	delta-BHC	0.050IU
58-89-9	gamma-BHC (Lindane)	0.050IU
76-44-8	Heptachlor	0.050IU
309-00-2	Aldrin	0.050IU
1024-57-3	Heptachlor epoxide	0.050IU
959-98-8	Endosulfan I	0.050IU
60-57-1	Dieldrin	0.10IU
72-55-9	4,4'-DDE	0.10IU
72-20-8	Endrin	0.10IU
33213-65-9	Endosulfan II	0.10IU
72-54-8	4,4'-DDD	0.10IU
1031-07-8	Endosulfan sulfate	0.10IU
50-29-3	4,4'-DDT	0.10IU
72-43-5	Methoxychlor	0.50IU
53494-70-5	Endrin ketone	0.10IU
5103-71-9	alpha-Chlordane	0.50IU
5103-74-2	gamma-Chlordane	0.50IU
8001-35-2	Toxaphene	1.0IU
12674-11-2	Aroclor-1016	0.50IU
11104-28-2	Aroclor-1221	0.50IU
11141-16-5	Aroclor-1232	0.50IU
53469-21-9	Aroclor-1242	0.50IU
12672-29-6	Aroclor-1248	0.50IU
11097-69-1	Aroclor-1254	1.0IU
11096-82-5	Aroclor-1260	1.0IU

2E  
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: E & E INC.

Contract:

Lab Code: EAND

Case No.: 052

SAS No.:

SDG No.:

EPA	S1	OTHER
SAMPLE NO.	(DBC)#	
01 PBLKW5	127	0
02 PBLKW6	112	0
03 MSB2	124	0
04 W021	51	0
05 W023	58	0
06 W024	68	0
07 W025	71	0
08 W025D	64	0
09 WFB06	120	0
10 WRB06	124	0
11 W025DMS	59	0

ADVISORY  
QC LIMITS  
( 24-154)

S1 (DBC) = Dibutylchloroendate

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out



1D  
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKW6

Lab Name: E & E INC.

Contract:

Lab Code: EANDE

Case No.: 052

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 02\_632-10

Sample wt/vol: 1000 (g/mL) ML

Lab File ID:

Level: (low/med) LOW

Date Received:

% Moisture: not dec. dec.

Date Extracted: 05/08/91

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 05/22/91

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

319-84-6	alpha-BHC	0.050IU	
319-85-7	beta-BHC	0.050IU	
319-86-8	delta-BHC	0.050IU	
58-89-9	gamma-BHC (Lindane)	0.050IU	
76-44-8	Heptachlor	0.050IU	
309-00-2	Aldrin	0.050IU	
1024-57-3	Heptachlor epoxide	0.050IU	
959-98-8	Endosulfan I	0.050IU	
60-57-1	Dieldrin	0.10IU	
72-55-9	4,4'-DDE	0.10IU	
72-20-8	Endrin	0.10IU	
33213-65-9	Endosulfan II	0.10IU	
72-54-8	4,4'-DDD	0.10IU	
1031-07-8	Endosulfan sulfate	0.10IU	
50-29-3	4,4'-DDT	0.10IU	
72-43-5	Methoxychlor	0.50IU	
53494-70-5	Endrin ketone	0.10IU	
5103-71-9	alpha-Chlordane	0.50IU	
5103-74-2	gamma-Chlordane	0.50IU	
8001-35-2	Toxaphene	1.0IU	
12674-11-2	Aroclor-1016	0.50IU	
11104-28-2	Aroclor-1221	0.50IU	
11141-16-5	Aroclor-1232	0.50IU	
53469-21-9	Aroclor-1242	0.50IU	
12672-29-6	Aroclor-1248	0.50IU	
11097-69-1	Aroclor-1254	1.0IU	
11096-82-5	Aroclor-1260	1.0IU	

4C  
PESTICIDE METHOD BLANK SUMMARY

Lab Name: E & E INC.

Contract:

Lab Code: EANDC

Case No.: 052

SAS No.:

SDG No.:

Lab Sample ID: 01\_632-10

Lab File ID:

Matrix:(soil/water) WATER

Level:(low/med) LOW

Date Extracted: 05/08/91

Extraction:(SepF/Cont/Sonc) SEPF

Date Analyzed (1): 05/22/91

Date Analyzed (2):

Time Analyzed (1): 2055

Time Analyzed (2):

Instrument ID (1): 6000\_2A

Instrument ID (2):

GC Column ID (1): OV-1

GC Column ID (2):

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA	LAB	DATE	DATE
SAMPLE NO.	SAMPLE ID	ANALYZED 1	ANALYZED 2
01MSB2	3121_632-10	05/22/91	
02W021	10143	05/23/91	
03W023	10144	05/23/91	
04W024	10145	05/23/91	
05W025	10146	05/23/91	
06W025D	10147	05/23/91	
07WFB06	10148	05/23/91	
08WRB06	10149	05/23/91	
09W025DMS	10147MS	05/23/91	

COMMENTS: